TOJNED
THE ONLINE JOURNAL
OF NEW HORIZONS IN EDUCATION

ISSN: 2146-7374

The Online Journal of New Horizons in Education

Volume 8 Issue 2
April 2018

www.tojned.net
April 2018

Contact Address:
Prof. Dr. Aytekin İŞMAN
TOJNED, Editor in Chief
Sakarya-Turkey

Published in TURKEY

Message from the Editor-in-Chief

Dear Colleagues,

TOJNED welcomes you. TOJNED would like to thank you for your online journal interest. The online journal system has been diffused very fast for last eight years. TOJNED has continued to diffuse new trends in education science to all over the world.

TOJNED is confident that readers will learn and get different aspects on education science. Any views expressed in this publication are the views of the authors and are not the views of the Editor and TOJNED.

TOJNED thanks and appreciate all reviewers who have acted as reviewers for one or more submissions of this issue for their valuable contributions.

TOJNED, TASET, Governor State University & Sakarya University will organize INTE -2018 (www.int-e.net) between July 18 - 20, 2018 in Paris, France.

For any suggestions and comments on the international online journal TOJNED, please do not hesitate to send mail.

Call for Papers
TOJNED invites you article contributions. Submitted articles should be about all aspects of education science. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJNED. Manuscripts must be submitted in English.

TOJNED is guided by TOJNED's editors, guest editors and advisory boards. If you are interested in contributing to TOJNED as an author, guest editor or reviewer, please send your CV to tojned@gmail.com.

April 01, 2018
Prof. Dr. Aytekin ISMAN
Editor-in-Chief
Sakarya University

Table Of Contents

ACADEMIC BURNOUT AND ACADEMIC PERFORMANCE OF AGRICULTURAL STUDENTS

Mahtab Pouratashi
Assistant Professor, Institute for research & planning in higher education, Iran
mah.pouratashi@gmail.com

ABSTRACT
Academic burnout is one of the major challenges of educational system. The purpose of this study is to investigate the relationship between academic burnout and academic performance of agricultural students. A sample of 247 students from Iranian Colleges of agriculture was randomly selected and answered to the questionnaire. Reliability and validity of instrument were determined through opinions of faculty members and application of Cronbach's Alpha. Data were analyzed descriptively and inferentially using SPSS (Statistical Package for Social Science)/Windows. Our study implied that both similarities and differences could be observed on the factors influencing academic burnout of agricultural students. The model obtained in the study revealed that the three dimensions of academic burnout had negative and significant effects on academic performance.The results of regression analysis revealed that academic inefficacy could explain the most variation in academic performance of agricultural students. Based on the findings, recommendations were put forth.
Key words: academic burnout, academic performance, student, GPA

INTRODUCTION

Burnout is defined as “a state of physical, emotional, and mental exhaustion caused by long-term involvement in conditions that are emotionally demanding” (Pines & Anderson, 1988; cited in Schaufeli & Buunk, 1996). The notion of burnout was first suggested in 1970s by the American psychologist Herbert Freudenberger, referring tothe consequences of severe stress and high ideals in “helping” professions (National Library of Medicine, 2017).According to Christina Maslach, “job burnout is a psychological syndrome that involves a prolonged response to stressors on the job” (Maslach, 2003). A stressful lifestyle can put people under extreme pressure, so they feel exhausted, burned out, and unable to cope (National Library of Medicine, 2017). The concept of burnout has developed over time, and now is used not only in job settings, but also among students (Demerouti et al., 2001; Bakker et al., 2002). students’ core activities can be observed as a kind of work, so academic burnout exists (Zhang et al., 2013). A number of studies have identified the variables that lead to academic burnout, including: gender (Jahedizadeh et al. 2015), self-regulatory strategies (Ghanizadeh & Ghonsooly, 2014), perfectionism (Chang et al., 2015), neuroticism (Reichl et al. 2014), and so forth.

Academic burnout is consisted of three conceptually distinct but empirically related dimensions including Emotional exhaustion, academic uninterested, and academic inefficacy. Students who experience academic burnout usually demonstrate symptoms such as: lack of participation in classroom activities, inability to maintain a steady presence in classroom and learning, and lack of interested to lessons (Asghari et al., 2015). Individuals suffering from burnout feel exhausted, uninterested, and ineffective; instead of feeling energized, interested, and efficacious (Jahedizadeh et al., 2015). Academic burnout may disrupt students’ enthusiasm to pursue learning and may have negative effect on academic performance (Saviz and ZandvanianNaeini 2014).

Academicperformance of students is one of the most important pieces of information used by employers in decision making as a signal of individuals’ ability. Based on the issue that each system tries for its growth and development and achieving to its planned objects, it is essential to pay attention to manpower. So, there is a key question: why some students’ performance is better than the others? Previous studies found different answers, such as gender (Sharifian, 2001), student interest in academic major (King & Kotrlid, 1995), learning styles (Garton et al., 2000; Garton et al., 2002), and etc. This study deals with the influence of academic burnout on academic performance of students.

On the other hand, agricultural sector is one of the most crucial agents in development. With the development of more diverse markets in agriculture, competence work-forces are required to improve agricultural production, processing and marketing of products, and successful implementation of agricultural policies in the country (Sundstøl, 2004). Therefore, with improving the efficiency of agricultural colleges and universities in fostering skillful workforce, it would be possible to take a major step in developing the agricultural sector. Hence, the major aim of this study is to examine the relationship between academic burnout and academic performance of agricultural students.

Materials and methods

Population and Sample

The statistical population of this study included students at the Colleges of agriculture at Universities of Tehran, Yasouj, Ilam, ShahidBahonar Kerman, and Razi Kermanshah. According to Cochran Formula, a sample of 247 students was selected, using random sampling method.

Instrumentation

Data were collected from the target group by means of a questionnaire. The first section of questionnaire contained demographic characteristics of respondents and the remaining sections consisted questions related to research objectives**.** For assessing academic burnout, the questionnaire made byMaslach and revised by Bresó et al. (2007) was applied. The scale has 15 items and assesses 3 dimesions of academic burnout including emotional exhaustion, academic uninterested, and academic inefficacy, on a 5-point Likert scale. For assessing academic performance of agricultural students, grade point average (GPA) of respondents was measured. Face validity of the instrument was tested by a panel of experts consisting of agricultural faculty members. A pilot study was conducted for testing the reliability and improving the questionnaire. Cronbach's alpha was used to estimate reliability of the questionnaire and showed the high reliability for the instrument.

Data analysis

Analysis of data was done in two sections including descriptive and inferential statistics. Statistics such as frequency distribution, percentage, mean and standard deviation were used in the descriptive section. Correlation coefficient, t-test were used in the inferential analysis section. Furthermore, a multiple regression analysis was used to explain variation in academic performance of students. In applying the statistical techniques, Statistical Package for Social Science (SPSS) was used.

Results and Discussion

Demographic characteristics of respondents:

Frequency distribution of respondents in relation to demographic characteristics indicated that 58.7% of the respondents were male and 41.3% were female.Respondents were on average 21 years old and the range of respondent age was between the age of 18 and 25 years. 76.9 % of students had no previous experience on agriculture and only 23.1% had some agricultural experience before entering the university.More than half of the respondents (63.2%) were in dormitory and the rest (36.8%) lived with their family.

Agricultural students' academic burnout

Emotional exhaustion mean score of students was 14.96 of a maximum possible score of 25, academic uninterested mean score was 12.33 of a maximum possible score of 20, and academic inefficacymean score was 15.89 of a maximum possible score of 30.

By gender

It was found that male students' emotional exhaustion and academic inefficacy mean scores were higher (but not significantly) than female students' emotional exhaustionand academic inefficacy mean scores (EE: t= .404^{ns}, *p*= .688; AI: t= .104^{ns}, *p*= .917). On the contrary, female students' academic uninterested mean score was significantly higher than male students' academic uninterested mean score (AU: t= -2.043*, *p*= .042) (Table 1).

Table 1- Results of t-test

		Gender				
Variable	Label	Male		Female		t-Value (Sig.)
		Mean	SD	Mean	SD	
Emotional exhaustion	EE	15.03	3.43	14.86	3.13	.404 (.688)
Academic uninterested	AU	12.05	2.58	12.75	2.73	-2.043* (.042)
Academic inefficacy	AI	15.91	3.82	15.86	3.09	.104 (.917)
		Residence				
		Home		Dormitory		
		Mean	SD	Mean	SD	
Emotional exhaustion	EE	14.82	3.29	15.04	3.31	-.506 (.614)
Academic uninterested	AU	11.82	2.35	12.64	2.79	-2.362* (.019)
Academic inefficacy	AI	15.12	3.72	16.33	3.34	-2.571* (.011)
		Agricultural experiences				
		Yes		NO		

		Mean	SD	Mean	SD	
Emotional exhaustion	EE	14.45	3.37	15.11	3.27	-1.324 (.187)
Academic uninterested	AU	11.91	2.42	12.47	2.72	-1.397 (.164)
Academic inefficacy	AI	14.91	3.76	16.18	3.42	-2.405* (.017)

ns: Non significant
*: $p<.05$
**: $p<.01$

By residence
According to the findings (Table 1), the emotional exhaustion mean score of students lived in dormitory was higher (but not significantly) than the other group's mean score (EE: t= -.506ns, p= .614). In addition, the academic uninterested and academic inefficacy mean scores of students lived in dormitory was significantly higher than the other group's mean scores (AU: t= -2.362*, p= .019; AI: t= -2.571*, p= .011).

By agricultural experiences
The findings (Table 1) showed that the emotional exhaustion, academic uninterested, and academic inefficacy mean scores of students with no previous experiences in agriculture were higher than the other group mean scores, with one of those was significant (AI: t= -2.405*, p= .017).

Correlation analysis
Pearson correlation analysis was used to examine the relationship between academic performance and the three dimensions of academic burnout. The findings showed that all the three dimension of academic burnout had negative and significant correlation with academic performance, in which the level of significance of two dimensions (Emotional exhaustion and Academic inefficacy) was at 1% and one of the dimension (Academic uninterested) was at 5% with academic performance.

Table 2- Correlation analysis (academic performance and academic burnout)

Independent variable	Label	r	Sig.
Emotional exhaustion	EE	-.168**	.008
Academic uninterested	AU	-.132*	.038
Academic inefficacy	AI	-.205**	.001

* Significant at p< .05
** Significant at p< .01

Regression analysis
In order to explain variation in the extent of academic performance of agricultural students by academic burnout, a multiple regression analysis was conducted. An overview of stepwise model is shown in Table 3. Among independent variables that have significant correlation with dependent variable, academic inefficacy and academic uninterested have entered to regression equation by two steps.

Table 3- Regression analysis

Variables	Label	Unstandardized coefficients	Standardized coefficients	t	Sig.
		B	Beta		
Constant		18.535		44.571	.000
Academic inefficacy	AI	-.059	-.203	-3.262	.001
Academic uninterested	AU	-.050	-.129	-2.074	.039
a. Dependent Variable: GPA					

Considering the results shown in the table 3, regression equation in standard situation will be as follow:

Y= constant + $B_1X_1 + B_2X_2$ (1)

Equation (1) shows that (Y) is used as dependent variable that representing academic performance of students, (X_i) is independent variable and (B_i) is the coefficient of independent variable. Consequently, final equation of regression is:

Y = 18.535 - .059 AI - .050 AU

In addition, the results showed that academic inefficacy (Beta= 0.203) could explain the most variation in academic performance of agricultural students.

CONCLUSION

Since academic burnout is one of the major challenges of educational system, it is important to study the predictors and also, the consequences of academic burnout, that this study addressed the issues. One of the questions examined in this study was "Are there significant differences between students on the basis of academic burnout?".The findings showed that there was significant difference in academic uninterested of male and female students, in which females shoed more academic uninterested compared with the other group. So, the H0 that express "There is no significant difference in academic uninterested between male students and female students" is rejected. The result is accordant to the study done by Jahedizadeh et al. (2015), in which gender and academic burnout were correlated. There were significant differences in academic uninterested and academic inefficacy between students lived in dormitory with the other group. Hence, the H0s express "There is no significant difference in academic uninterested between students who live in dormitory and students who live with their family" and "there is no significant difference in academic inefficacy between students who live in dormitory and students who live with their family" are rejected. In addition, according to the findings, students with no previous experiences had significantly more academic inefficacy than the students with previous experiences. Hence, the H0 that express "There is no significant difference in academic inefficacy between students who have previous experience in agriculture and those who havenot" is rejected.

Correlation analysis for probabilistic relationship was used to test the relations between students' academic performance with the three dimensions of academic burnout.The results showed that the extent of emotional exhaustion, academic uninterested, and academic inefficacy were negatively and significantly correlated with the grade point average of students. Therefore, The three H0s that express "there is no correlation between students' grade point average and emotional exhaustion", "there is no correlation between students' grade point average and academic uninterested", and "there is no correlation between students' grade point average and academic inefficacy" were rejected and can be concluded that academic burnout is correlated withacademic performance. Finally, according to the results of regression analysis, academic inefficacy can explain the most variation in academic performance of agricultural students.

The findings revealed that academic burnout disrupt students' interest to pursue learning and has negative effect on academic performance. So, it is recommended that the consulting centers at University provide effective consultations about the methods to self-directed learning and increasing motivation. Also, it is recommended that faculty members use appropriate approaches to stimulate students' interest for effective leaning.

REFERENCES

Asghari, A., Saadati, S.M., Ghodsi, A. &AzizFard, F. (2015). Review the academic burnout and Its Relationship with Self-Esteem in Students of Medical Sciences University at Neyshabour. Scholars Journal of Applied Medical Sciences, 3(9C):3329-3334

Bakker, A. B., Demerouti, E., &Schaufeli, W. B. (2002). Validation of the Maslach Burnout Inventory – General survey: An internet study. Anxiety, Stress and Coping, 15, 245–260.

Chang, E., Lee, A., Byeon, E., & Lee, S.M. (2015).Role of motivation in the relation between perfectionism and academic burnout in Korean students. Personality and Individual Differences 82 (2015) 221–226

Demerouti, E., Bakker, A. B., Nachreiner, F., &Schaufeli, W. B. (2001). The job demands-resources model of burnout. Journal of Applied Psychology, 86, 499–512.

Garton, B.L., A.L. Ball and J.E. Dyer, 2002.The academic performance and retention of college of agriculture students.Journal of Agricultural Education. 43(1): 46-56.

Garton, B.L., J.E. Dyer and B.O. King, 2000.The use of Learning Styles and admission criteria in predicting academic performance and retention of college freshmen, Journal of Agricultural Education. 41(2): 46-53.

Ghanizadeh, A., &Ghonsooly, B. (2014). A tripartite model of EFL teacher attributions, burnout, and self-regulation: Toward the prospects of effective teaching. *Educational Research for Policy and Practice, 13*, 145–166.

Jahedizadeh, S., Ghanizadeh, A., &Ghapanchi, Z. (2015).A Cross-contextual analysis of EFL students' burnout with respect to their gender and educational level. International Journal of English and Education, 4(3), 10–22

King, L. and J. W. Kotrlid, 1995.Reference of the general education, core curriculum to career goals of college of Agriculture student, Journal of Agricultural Education. 30(3): 26-33.

Maslach, Ch. (2003). Job Burnout: New Directions in Research and Intervention. Current Directions in Psychological Science (Wiley-Blackwell), 12 (5), October 2003, 189-192

National Library of Medicine (2017). Depression: What is burnout?, Retrieved from: https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0072470/

Reichl, C., Wach, F.-S., Spinath, F. M., Brünken, R., &Karbach, J. (2014). Burnout risk among first-year teacher students: The roles of personality and motivation. *Journal of Vocational Behavior*, *85*, 85–92.

Saviz, M. &ZandvanianNaeini, A. (2014). A Study of the Relationship between Quality of Learning Experiences and Academic Burnout and Academic Achievement of Postgraduate Students of University of Yazd. Interdisciplinary Journal of Contemporary Research in Business, 5(12), 312-331.

Schaufeli, W.B &Buunk, b.P. (1996). Profesional burnout. In: Handbook of work and health psychology, Edited by: M. Schabracq, J.A.M. Winnubst and C.L. Cooper. John Wiley & Sons Ltd.

Sharifian, A., 2001.Effective factors influencing academic achievement of students in Shahed University.Quarterly Journal of social science. (15-16): 199-230.

Zhang, X., Klassen, R.M. & Wang, Y. (2013).Academic Burnout and Motivation of Chinese Secondary Students. International Journal of Social Science and Humanity, Vol. 3, No. 2, 134-138.

COMPARISON OF GENERAL MUSIC CULTURE OF CITIZENS LIVING IN NEIGHBOR METROPOLISES TRABZON/TURKEY AND BATUMI/GEORGIA

Işıl Güneş Modiri Dilek
isilmodiri@gmail.com

ABSTRACT
People's knowledge about classical world music, composers, performers and much known basic music concepts, constitute their general musical culture. This research was carried out in order to compare of the people's general musical cultures of two neighbouring cities: Trabzon/Turkey and Batumi/Georgia. The study's study group consisted of n =20 (10 + 10) randomly selected from the people living in the cities of Trabzon and Batumi, in the regions where the families from the middle socio-economic level reside. The research was a qualitative study and the interview form consisting of open- ended questions developed by the researcher was used for determining the general music cultures of the study group. The obtained data were analyzed by descriptive analysis. At the end of the research, the general music cultures of the people living in neighbouring cities "Trabzon and Batumi" from "Turkey and Georgia" had been compared via their answers and the results had been interpreted and made some evaluations.
Keywords: General Music Culture, Music Culture Comparison, Trabzon and Batumi, Turkey and Georgia

INTRODUCTION

Music has existed in every phase of human life since the time of man's existence. Music is not a luxury for man but an indispensable necessity. There is almost no one who does not have a place the music in his life. "In all stages of a person's life who is social, sound became an important stimulus from the moment men was born and the musical harmony, and beautiful sounds complement their spiritual existence" (Şen, 2016).

There isn't life without music. "In individual and community's life Music is one of the important area with the characteristics of being a cultural heritage with art direction and being a reflection of cultural identity"(Şen, 2016). According to the TDK dictionary, "Music is the art of describing certain feelings and thoughts in harmonious voices within the frame of certain rules." It is also described as "reading and playing of the works of composed voices arranged in this manner". Music has influenced the societies' culture and also the other cultures it has entered.

In other words, music and culture are in constant interaction. As a Society-Science term, culture is defined as "the whole of all the material and spiritual values created in the process of historical and social development and the means of measuring the sovereignty of man's natural and social environment which is used to create them and transmit them to the next generation" (İzzet Benice, cited: turkedebiyati.org) or "fullest extent of art works and thoughts foible to a community or a society" (Salah Birsel, cited: turkedebiyati.org).

When we consider culture as an individual term rather than as a society term, the following definitions prevail: "The form of reasoning, pleasure and criticism developed through learning and experiences" (Mehmet Kaplan, cited: Turkedebiyati.org), "emphasizes the importance of reasoning, criticism and appreciation learning, experimentation and experience"," knowledge that the individual earned in any field" (google dictionary). In this context, when we deal with the concept of "Music Culture" in an individual sense, we can define it as follows: "Knowledge acquired by the individual in the field of music" or "Musical appreciation, reasoning, criticism and development of knowledge through education, experimentation and experience". In this study, the "musical culture" was discussed as its individually meaning.

General Music Culture is generally similar in terms of common language, culture, religion and educational conditions for the people living in close geographical areas, but is it possible that the general musical cultures of people in two cities separated by borders (country boundaries) in terms of language, culture, religion and educational conditions differ from each other even though they are located in close geographical locations?

In order to answer this question, two neighbouring cities of Turkey and Georgia which are Trabzon and Batumi, were asked questions about music to compare their general music cultures.

Trabzon is a city established in Turkey, in the north-east of Eastern Anatolia, at the coast of a natural port of the Black Sea, at the beginning of the transit route to Asia and the Middle East. It is 41 degrees north latitude and 39

degrees 43 degrees east longitude. The surface area is 4685 km2 (trabzonguldak6167.blogcu). The language of people who live in Trabzon is Turkish, religious is Islam.

Batumi is the capital city of Acara, an autonomous republic in Georgia, and the port city on the shores of the Black Sea. The geographical location of Batumi is 37 ° 32 '59 "North and 32 ° 45' 59" East gps coordinates. The surface is 64.9 km2. The language of people who live in Batumi is Georgian; their religions are Islam and Orthodox Christians. The distance between these two cities is 205.9 km and it takes approximately 2 hours and 54 minutes by a car.

If we mention the history of the Trabzon briefly; Ionian originates the Miletus, after the Western Anatolia they came to the Black Sea in the 7th century BC. and established colonial cities on these coasts. Trabzon is also one of those colonies along with the capital city Sinop, and many researchers show this period as the first foundation of the city. When the Roman Empire was divided into two pieces in 395, Trabzon remained within the borders of the Eastern Roman / Byzantine Empire, which was central Istanbul. Muslim Arabs came to Eastern Black Sea and Trabzon in the raids they had organized in Anatolia since the beginning of 8th century. On the occasion of the Byzantine Empire's passing by the Latin in the 4th Crusade in 1204, Alexios and David, the descendants of Emperor I Andronicus Komnenos from Istanbul, and with the help of Georgian Queen Tamara, the Kingdom of Komnenos established independently in Trabzon in 1204. The Ottoman Forces under the leadership of Sultan Mehmed the Conqueror surrounded the region, conquered Trabzon in 1461 and ended the dominance of the Komnenos. The Russians conquered Trabzon on April 14, 1916, and remained dominant here for nearly two years. In 1917, the "Bolshevik Revolution" in Russia, the Tsarist regime was demolished. On top of that, there was a great panic in the Russian army. This leads to the withdrawal of the Russians from Trabzon. The Turkish Gangs descended to Akçaabat and walked towards Trabzon from three crews under the command of Captain Kahraman Bey and take Trabzon back on 24 February 1918 (trabzon.gov.tr).

If we look at the history of Georgia, people have been alive since ancient times in Georgia. B.C. In 65, Georgian bastions entered Rome domination. After accepting Christianity in 337, Georgia faced many battles between the Byzantine and Persian empires form ay years. Muslims conquered Tbilisi in 654 and established an emirate in the region. The second David took Tbilisi back from the Muslims. The boundaries of Georgia, which experienced its strongest period during the reign of Queen Tamara (1184-1213), extended from Azerbaijan to Circassia and from Erzurum to Gence. After a while, the country divided into principalities because to fighting each other. Ottoman armies entered the Imereti in 1510 and took over the capital city Kutaisi. With the Treaty of Georgievs securing the independence and territorial integrity of Georgia, the lands were under the protection of Russia (1783). In 1810 the Russians took over Imereti and then other small Georgian principalities. Batumi and Potty harbours under the Ottoman administration and the south-western lands were conquered by the Russians after the Ottoman-Russian harbours as a result. On 26 May 1918 Georgians established an independent state and accepted the German protection. When the Germans were defeated, the country was occupied by the British. The entente states actually recognized Georgia in January 1920. With the new adopted Constitution in 1936, Georgia became one of the 15 republics bringing the Soviet Union to the fray. Georgia declared its independence in 1991 and joined the Commonwealth of Independent States the same year (cografya.gen).

After declaring Georgia's independence, there have been serious social and economic changes in the country. These changes were reflected in the education as well as in all areas. An elderly citizen who is living in Batumi tells about these changes as:

"During the Soviet era, education was done more seriously and properly. Schools continued when the system collapsed, but there were irregularities as teacher salaries were not paid. In addition, absences from schools began. People started getting diplomas without going to school. Diplomas have been sold with money. It was a transition period. This situation lasted for 10 years. After 1991, education completely lost its quality. In the following years it started to improve slowly but new young people did not get a full education. Teachers were minus in the schools. They were also absent. Sale of diplomas with money has completely boosted the poor quality of education. Today, they are starting to recover. After 2004, serious education began again in schools. The current education is good.

The system changed and the people dropped into emptiness. During this period, all the factories in this region have closed down. Everyone lost their job. They did not own large land anyway. Agriculture was carried out by the state. When all these stopped, people fell into emptiness. During this period, everything has deteriorated. The quality deteriorated mainly for schools and education. Most people did not go to school. Everyone started looking for a way to earn their bread. Many people went to other countries such as Turkey and Russia and had a struggled life. This process continued until the Saakashvili revolution of 2004. A new formation began after

Saakashvili's entry. Everything has been rearranged and done properly. Education has gained importance again. But when we look at it, the old people are better educated and have a better general culture. The young people are very uneducated and uninformed. This is also the case for music. In the past there were different musical instruments or a piano in all houses. Now you can hardly see that. And most of them sold their pianos for bread. There were antique pianos. They even sold their guitars. Music, sports and other social activities were totally abandoned. The only issue was “How can I just earn my bread?”. This was all because of the system. It will take a long time to recover from all of this. Maybe it will never be like the old times because the education here is based on the money. You must pay for a good school. There are also Turkish schools here. There are other foreign schools too like German Colleges. They also give education here. Some of the people will receive good education because they can pay and some will not receive a good education and quality will decrease in the whole society again. Those who get a good education in good schools will be elite, those who cannot, will remain uneducated."

In the light of the information given above, this study aims to compare the general music cultures by asking about music to the people who live in neighbouring metropolises Batum and Trabzon, which are separated from each other by geographical boundaries.

AIM

This study was carried out with the aim of comparing the general musical cultures of the people living in two neighbouring cities Trabzon and Batumi from neighbouring countries Turkey and Georgia.

METHOD

Study Groups

The study's study group consisted of n = 20 (10 + 10) people randomly selected from the people living in the cities of Trabzon and Batumi, in the regions where the families from the middle socio-economic level reside.

Collecting Data

According to Günay (2006), "those who create music in the music art are composers. Those who give life to it are performers and listeners are in the consumer situation". For this reason, in order to measure the general musical culture of the study group, they were asked about world famous composers, performers and some very basic music terms. The obtained data were analyzed by descriptive analysis with a qualitative approach.

Analysis of Data

In this qualitative study, the answers of the study group to the open-ended questions developed by the researcher were tabled and interpreted. Descriptive analysis and content analysis approaches were used for the analysis of answers. According to Yıldırım and Şimşek (2000), the aim of descriptive analysis is to organize and interpret the obtained data for the readers. The aim of content analysis is to reach new associations and concepts among the collected data.

FINDINGS

In this section, the information about the study group and their answers were tabled and interpreted. In order to make it easier to understand, separate tables were created for the answers given to each question.

In the tables, abbreviations as **"P" for participant**, **"B" for Batumi** and **"T" for Trabzon** were used.

Table 1: Information on the cities, genders, ages and occupations of the participants

Participants	City	Sex	Age	Job
P1	Batumi	Male	47	Lawyer
P2	Batumi	Male	38	Religious Teacher
P3	Batumi	Male	61	Merchant
P4	Batumi	Male	51	Military Retired
P5	Batumi	Male	63	Retired Pilot
P6	Batumi	Male	58	Ship Master
P7	Batumi	Female	32	Restaurant Worker
P8	Batumi	Female	62	Lawyer
P9	Batumi	Female	21	Pharmacist
P10	Batumi	Female	40	Merchant

P1	Trabzon	Male	34	Computer Eng.
P2	Trabzon	Male	42	Marketing
P3	Trabzon	Male	39	Chemistry Eng.
P4	Trabzon	Male	37	Fisheries Technical Eng.
P5	Trabzon	Male	32	English teacher
P6	Trabzon	Male	48	Math teacher
P7	Trabzon	Female	44	Teacher
P8	Trabzon	Female	39	Engineer
P9	Trabzon	Female	40	Order Operator
P10	Trabzon	Female	36	Nurse

(*P=Participant, B= Batumi, T= Trabzon)*

As can be understood from Table 1; 10 people (6 males, 4 females) from each of the cities of Batumi and Trabzon, totally 20 people (12 males, 8 females) participated in this study. The average age of those who live in Batumi was 47.3, and those who live in Trabzon was 39.1. Since the study group was chosen randomly, the professions vary. When we look at the occupational groups in the table, it is seen that the study group was generally well educated and had good professions.

Table 2: Participants' knowledge and levels on musical performances

Question 1	**Do you play any instruments? If yes, on which level ...**
P1B, P2B, P3B, P6B, P7B, P8B, P9B	No
P4B	Guitar, in good level
P5B, P10B	Piano, a little
P1T, P3T, P4T, P6T, P7T, P8T, P9T	No
P2T	Flute, Beginner
P5T	Guitar, advanced
K10T	Clarinet - Lowest level

(*P=Participant, B= Batumi, T= Trabzon)*

According to Table 2, most of participants do not play any instrument (70%). A small proportion of participants (20%) can play an instrument at an initial level. (%10) of the participants specified that they play their instruments in advanced level. The results do not change when the participants from the two cities were compared.

Table 3: Information on participants' recognition of world famous composers

Question 2	**Could you name a world famous composer? Do you know which period this composer lived in?**	**True (T) False (F) No Answer (NA)**
P1B	Joseph Verdi, Romantic	T, T
P2B, P7B	----, ----	NA, NA
P3B	Zülfü Livaneli, Contemporary	F, F
P4B	Katie Melua, Contemporary	T, T
P5B	Beethoven, 17th Century	T, F
P6B	Tchaikovsky, about 100 years ago	T, T
P8B	Beethoven, in1700's	T, F
P9B	Nika Lenina, Contemporary	F, F
P10B	İllya Bakanidze, Contemporary Compeser and Pianist	F, F
P1T	Mozart, 19th Century	T, F
P2 T	Mozart, 19th Century	T, F
P3 T	----, -----	NA, NA
P4 T	Beethoven, ----	T, NA
P5 T	Bach, baroque period	T, T
P6 T	Mozart, 18th Century	T, T

P7 T	Beethoven, 16th Century	T, F
P8 T	Beethoven, in 1800's	T, T
P9 T	Mozart, -----	T, NA
P10T	Beethoven, in1800's	T, T

(*P=Participant, B= Batumi, T= Trabzon)*

When Table 3 is examined, participants living in Batumi responded 40% correct and 40% wrong answers to the questions about world famous composers. 20% did not answer. Participants living in Trabzon answered the questions 65% correctly and 15% wrongly. 20% did not answer. From here it can be concluded that the participants from Trabzon have more information about the world famous composers.

Table 4: Information on participants' recognition of the world's famous orchestra conductors

Question 3	**Could you say the name of a famous orchestra conductor living in our age? Where's this conductor from?**	**True (T) False (F) No Answer (NA)**
P1B, P2B, P3B, P4B, P5B, P6B, P7B, P9B	----, ----	NA, NA
P8B	Cansul Kaxidze, Contemporary Georgian	T, T
K10B	Cansul Kaxidze, Contemporary Georgian	T, T
K1T	Rengim Gökmen, Turkish	T, T
K2T	Hikmet Şimşek, Turkish	T, T
K3T, K4T, K7T, K8T, K9T, K10T	----, -----	NA, NA
K5T	Gustavo Dudamel, Venezuela	T, T
K6T	Cem İdiz, ----	F, NA

(*P=Participant, B= Batumi, T= Trabzon)*

When Table 4 is examined, participants living in Batumi responded correctly to the questions by 20%. 80% of them did not answer. Participants living in Trabzon answered the questions correctly by 30% and wrong answers by 5%. 65% of them did not answer. It is understood from the results that the participants in Trabzon have a better general culture of recognizing orchestra conductors.

Table 5: Information on participants' recognition of world famous performers

Question 4	**Could you name a world famous pianist or violinist? Do you know in which period this artist lived in?**	**True (T) False (F) No Answer (NA)**
P1B	Sviatoslav Richter, Contemporary	T, T
P2 B	Khatia Buniatişvili, Contemporary	T, T
P3 B	İdil Biret, Contemporary	T, T
P4 B	Elisso Bolkvadze, Contemporary	T, T
P5 B	Eliso Viltzaladze, Contemporary Violinist	F, F
P6 B	Liana İsakadze, Contemporary Georgian Violinist	T, T
P7B, P9B	----, -----	NA, NA
P8 B	Liana İsakadze, Contemporary Georgian Violinist	T, T
P10B	Vanessa, Contemporary Violinist	T, T
P1T, P3T, P4T	----, ----	NA, NA
P2T	Fazıl Say, Contemporary	T, T
P5T	Martha Argerich, Contemporary	T, T
P6T	Fazıl Say- 21th Century	T, T
P7T	İdil Biret, Contemporary	T, T
P8T	Fazıl Say, in1900's	T, F
P9T	Fazıl Say, Contemporary	T, T
P10T	Fazıl Say- 20th Century	T, F

(*P=Participant, B= Batumi, T= Trabzon)*

When Table 5 is examined, most of the participants (70%) living in Batumi responded correctly to the questions about the world famous composer / pianist. 10% of the participants gave wrong answers to the question and

20% left the question unanswered. Likewise, most of the participants in Trabzon responded correctly (60%) to the related questions. 10% of the respondents gave wrong answers to the question and 30% left the question unanswered.

It is understood from the table that the participants living in Batumi are better acquainted with the world famous music performers. However, if we do make comparisons, participants from both cities answered this question truly at a high level. On the other hand, participants from both countries seem to know the names of the performers coming out of their own countries. In this context can be said that the most known pianists in Turkey were "İdil Biret and Fazıl say" and the most famous violinist in Georgia was "Liana Isakadze".

Table 6: Information about participants' recognition of the world's famous sopranos

Question 5	**Could you name a world famous soprano?**	**True (T) False (F) No Answer (NA)**
P1B, P2B, P3B, P6B, P9B, P10B	----	NA
P4B	Pavarotti	F
P5B	Montserrat Caballe	T
P7B	Pavarotti	F
P8B	Pavarotti	F
P1T, P2T, P3T, P6T, P7T, P8T, P10T	----	NA
P4T	Pavarotti	F
P5T	Sarah Brightman	T
P9T	Pavarotti	F

(*P=Participant, B= Batum, T= Trabzon)*

According to Table 6, 60% of participants in Batumi did not know the meaning of Soprano.30% answered this question incorrectly and only 10% of the participants answered this question correctly. Similarly70% of the participants in Trabzon did not answer the question about the meaning of Soprano. 20% gave wrong answer to the question and only 10% of the respondents answered the question correctly.

Comparing the percentages of the answers given by the participants from the two cities, it is understood that the participants living in the cities of Batumi and Trabzon have little or no knowledge of the world famous singers. It is thought that since they didn't know the term of "Soprano" is a terminology related to the female voice, they gave male voice artists names as the answer. Another result that can be infer from the answers is that "Luciano Pavarotti" is the most known opera artist by people from both cities.

Table 7: Participants' responses to the definition of "Soprano"

Question 6	**What does Soprano mean?**	**True (T) False (F) No Answer (NA)**
P1B, P2B, P3B, P7 B	----	NA
P4 B	A type of voice	T
P5 B	Female Voice	T
P6 B	It means singer	F
P8 B	It's a kind of music.	F
P9 B	Human Voice	F
P10B	Opera singer	F
P1T, P3T, P4T, P6T, P7T, P8T, P10T	----	NA
P2T	High Voice	T
P5T	The highest Female Voice	T
P9T	High Voice	T

(*P=Participant, B=Batumi, T= Trabzon)*

When Table 7 is examined, it is seen that only 20% of the participants living in Batumi respond correctly to the question. While 40% of the participants were unable to answer the question, 40% answered the question incorrectly. Considering the answers from Trabzon, it is seen that 70% of the participants couldn't answer the question. 30% of the respondents answered the question correctly. When we compare the answers of both cities,

it is seen that participants living in Trabzon know a little more the term of "Soprano", but when we consider the percentages, we can say that the participants living in Batumi and Trabzon have little or no knowledge about general music terms.

Table 8: Answers given by participants about the definition of music

Question 7	**What you can say about music?**
P1B	Good music is good. I like it if it's relaxing.
P2 B	Music is the power of God.
P3 B	I like music that expresses people problems. Like folk music.
P4 B	It is a report from the space that comes to man's mind.
P5 B	Music is like heaven.
P6 B	Music requires mastery and it makes human happy.
P7 B	It is something that relaxes the human.
P8 B	Music is the friend of a person. If a person likes music, he cannot leave it. If someone loves music, music loves him too. It's such a great love that all people are dealing with it all over the world.
P9 B	I like music.
P10B	The art of music, like art in painting and writing, is something that can go back towards God.
P1T	No life without music.
P2T	Music is the balance of life.
P3T	Sounds pleasant to the ear.
P4 T	Music is beautiful.
P5T	I see music as a passion that brings incredible emotion to the human being.
P6T	Listen to something perfect.
P7T	It is a science that restores a person's soul, adds colour, and reveals what exists in nature.
P8T	I don't have very much information.
P9T	Music is a part of life and it's perfect.
P10T	I want to say a lot but I don't have knowledge enough. Music is breath, peace and civilization.

(*P=Participant, B= Batumi, T= Trabzon)*

When Table 8 is examined, it is understood that all the participants say good things about music and love music. Participants living in Batumi have also touched on the artistic and divine aspect of music and defined music mostly as relaxing, happy, expressing problems, friend of human. Participants living in Trabzon have defined music as beautiful, relaxing, peacefulness, need and emotions.

CONCLUSION AND DISCUSSION

The concept of "Music Culture" can be defined both in terms of social and individual meaning. We can define music cultures in individual sense as "knowledge acquired by the individual in the field of music" or "development of musical tastes, reasoning, criticism and knowledge through education, experimentation and experiences". In this study, term of musical culture was discussed individually. In order to test and compare the music related general knowledge and cultures of the citizens living in the cities of Batumi and Trabzon, the open-ended questions which developed by the researcher, were asked to the people the answers given by the participants were interpreted and the following conclusions were reached:

In Georgia and Turkey, 10 out of every two big cities in Batumi and Trabzon which separated by geographical borders, participated in the study. The average age of those who participated in Batumi is 47.3, and those who participated in Trabzon are 39.1. The participants' professions vary.

Most participants do not play any instruments (70%). A small part of participants (20%) can play an instrument at beginners level. Ten percent of the participants said they play the instrument well. The results do not change when the participants in the two cities are compared.

When the chart (table) 3 is examined, participants living in Batumi responded 40% correctly of the questions about famous composers while participants living in Trabzon answered 65% correctly of it. From this, it can be concluded that the participants of Trabzon have more knowledge about the world famous composers.

When the chart (table) 4 is examined, 20% of the participants living in Batumi answered to questions about orchestra conductors correctly while 30% of participants living in Trabzon could not answer it correctly. It is understood from this that the participants in Trabzon have overall a better culture of recognizing orchestra chefs. It can be considered that people who live in Trabzon get this information on the TV they watch, because it emphasize some orchestra chefs especially. Rengim Gökmen and Hikmet Şimşek are well known orchestra chefs in Turkey.

From the answers given, it is understood that most of the participants who live in Batumi (70%) answered correctly to the questions about the world famous composer / pianist. Likewise, most of the participants who live in Trabzon answered (60%) correctly to the related questions. It is understood that the participants living in Batumi have better knowledge about the world famous music performers. On the other hand, participants from both countries seem to know the names of the performers from their own countries. In this regard, It can be said that the most known pianists in Turkey are “İdil Biret” and “Fazıl say”; the most famous violinist in Georgia is "Liana Isakadze".

According to chart (table) 6, only 10% of the participants living in Batumi have been able to name a world famous soprano. The situation of the participants living in Trabzon did not change. As the participants do not know that the term "Soprano" is a terminology related to female voice (See Table 7), it is seen that they answered the question with a male voice artist’s name which is "Luciano Pavarotti".

It is understood that all participants like music and say good things about it. Participants living in Batumi have also mentioned on the artistic and divine aspects of music while defining music as more relaxing, happy, expressing problems, making friends. Participants living in Trabzon have defined music more like; beauty, comforting, giving peace, as a need and waking up the emotions.

Generally speaking, two metropolitan cities of neighbouring countries, Batumi and Trabzon, answered the questions about General Music Culture in a similar level. Although the percentage by a narrow margin is higher of the correct answers of participants who live in Trabzon, this percentage is so low that we cannot say that the participants of Trabzon have higher general music culture. The answers given about the world famous composers, performers and the very basic terminologies, it is thought that the knowledge of people on this matter are based on by living and not obtained by reading the information on these topics. It is thought that it is because of the inadequate music education given by the schools.

The participants who play the instrument at a good level gave better answers to the questions; in this case it shows that instrument trainings contributed to their General Music Culture.

When the ages and their answers of the participants in Batumi are examined, it is understood that the older citizens who are educated while living under the Soviet Union have a higher level general culture of music than the young citizens who have recently studied. This is thought to be due to the economic and educational problems after declaring Georgia's independence.

As a result, it is considered that, general music cultures will increase in both countries if music education can be improved in schools, opportunities to go to the concerts can be provide, and instrument education can be extend.

REFERENCES

GÜNAY, Edip (2006). Müzik Sosyolojisi Sosyolojiden Müzik Kültürüne Bir Bakış, İstanbul: Bağlam Yayıncılık.

Şen, Ü. S. (2016). THE CONCEPT MUSIC AESTHETIC ON THE BASIS OF MAN AND SOCIETY, The Journal of International Social Research, www.sosyalarastirmalar.com, Cilt: 9 Sayı: 45 Volume: 9 Issue: 45

Yıldırım, A. & şimşek, H. (2000). *Sosyal Bilimlerde Nitel Araştırma Teknikleri*, Ankara: Seçkin Yayınevi.

http://www.cografya.gen.tr (Access Date 14.09.2017)

www.google.com.tr(Access Date 22.09.2017)

http://www.tdk.gov.tr (Access Date 02.10.2017)

http://www.trabzon.gov.tr (Access Date 15.09.2017)

http://trabzonguldak6167.blogcu.com (Access Date 02.09.2017)

www.turkedebiyati.org (Access Date 22.09.2017)

CONTROLLING DRUG ABUSE AND VIOLENCE AMONG ADOLESCENT CHILDREN THROUGH PLANNED GUIDANCE PROGRAMME: IMPLICATION FOR PARENTS AND TEACHERS

ALAKU, ASHEOTSALA .A. (MRS)
Department of Psychology/Guidance and Counseling, School of Education, Federal College of Education(Technical), Bichi, Kano State Nigeria
rossyashe@gmail.com

ABSTRACT
In the world today, adolescent children or youths are considered to be a veritable tool for achieving socio-economic development because they constitute the active population. But in some places especially in Nigeria youths are used as instruments of destruction because parental, biological curiosity and so many other factors predisposes them to drug abuse and later to violence. This paper examined how guidance programme can be use to control high rate of drug abuse and violence among adolescent children. The paper further discussed the concept of adolescence, drug abuse and violence and paper finally recommended that there should be home front conuselling and that parents should live an examplary life for their children to emulate.
Keywords: Drug Abuse,Violence,Adolecsent children, planned Guidance program, parents and Teachers

INTRODUCTION

Most human problem arise from cite situations and significantly affect the development of individuals from psychological perspective. Problems of adjustment are explained to be the result of the nature of psychosexual development of the individual (i.e stages of the individual either inform of success or failure which result into personality).

Sambo (2009) asserted that "problem of adjustment exist in all societies and it result into a number of moral decadence such as crime, violence, vandalism, stealing and consumption of alcohol and drug abuse which has the direct evolvement of youths and children as it enshrine in the Nigerian constitution recognizes that an individual below the age of seven is in capable of committing a crime, and an individual between seven to twelve years should be able to know what he ought not to do that is if he can be proved, he does not know he is not criminally responsible for his acts. But individuals between the age of twelve and 17 is regarded as a juvenile and while he may be responsible for his acts, or omissions, he is treated especially under the law by the children and young person's act instead of criminal procedure act.

The Concept of Adolescence:

Adolescence is the most important period of human life Chauhan (1989). Although he further argued that adolescence was an origin of Greek word, where "adolescere" was said to connotes "to grow to maturity". So many psychologists gave their clear understandings of the concept of adolescence. Some scholars believe that adolescence period is considered to be the period of individual's great ideals.

Dorthy, . in Chanhan (1989): sees adolescence as a process rather than a period, "a process of achieving the attitudes and beliefs needed for effective participation in the society". It is also considered to be the transitional period between childhood and adulthood.

Whatever it will be said on adolescence, many believe that it is the period where an individual's greater expansion on all facets of developmental characteristics like physical, moral, intellectual, social and emotional spear headed. Individuals at this period show significant changes in their life time and if not properly guided and conuselled, the society suffers series of atrocities and crimes of various degrees that is why psychologists shows keen interest on the study of adolescent psychology so that solutions to the problems at this stage is taken care – off, in order to avoid not only committing crimes but to properly mould adolescents behaviour for achieving socio-economic development because strength of individuals at this stage in all the developmental characteristics grows very rapidly and can be use by bad eggs to commit so many violence or crimes.

Drug Abuse and Violence:

Drug abuse is one of such problems that have been the major thread to the peaceful co-existence of all and sundry in our contemporary society, there by destroying the socio-political and economic dignity as well as integrity of dependence on life.

Garba, (2003): stated that "the danger of drug abuse to have been identified as a state of periodic or chronic intoxication, detrimental to the individual and society".

Drug abuse in this context can be seen as the excessive or constant use of any substance or drug that can lead to abuse (misused).

Youths constitutes one of the most deadly because faced by Nigerian society today because of their engagements in drug abuse and violence. Drug abuse and violence have been identified as social vices that must be wipe out.

A number of researches have shown that the causes of drug abuse originates from various angles including ill training from parents at home, un-conducive school environment, corrupt community and an alcoholic community. Self mal-adjustment resulting from poor personality, is also considered to be a cause of drug abuse among youths.

Types of Drug Abuse used by Youths:

There are so many types of drug abuse that are commonly used by our youths today. Idiege et al (2009), gave the below drug abuse use by youths and they include:

i. Alcohol
ii. Tobacco
iii. Cannabis – Manjuana, hashish
iv. Stimulants (Cocaine, cow leaves, synthetic stimulants)
v. Inhelants (Superglue, gasoline cleaning fluids)
vi. Depressants (Barbiturates, benzodiazen, pinos etc.

Ifeoma (2012) identified the following drug abuse use by our youths:

a. Narcotics
b. Sedatives
c. Tranquilizers
d. Stimulants
e. Hallucinogens

Tine (2013) also provide locally made drug abuse use by adolescent children and they includes:

i. Zakami (in Hausa)
ii. Solution
iii. Blue (Use for dying clothes)
iv. Gadagi (in Hausa)
v. Gutter and so on

Violence:

In the world today, many believe that drug abuse lead to violence. This is because intake of drug abuse can lead to so many things which include violence and crime. For instance Daily trust (2014) reported that teen female bomber believed to be aged between 17 and 19 attacked some states in Northern Nigeria".

Many believed that the perpetrators were given certain intoxicant before they used them for the attack. This is to tell you how adolescent children were used as yardstick for destruction of lives and properties. A person or an individual in his normal sense cannot engage himself/herself in a hostardly act like suicide bombings not only in Nigeria. In many parts of the world that are facing violence or insurgency youths are always used as means of destruction or achieve political and economical reasons.

Civil unrest in Congo, South Sudan, Liberia and so many African countries used children between the age of 12 – 20 as either rebels or instruments to achieve political and economical benefits.

In Nigeria, especially in 2014 alone Daily Trust (2014) reported that "female suicide bombers who operated in Kano & Gombe causes so many casualties ranging from lost of lives and properties".

In fact violence among youths cannot be over emphasized use of intoxicants and other hypnosis or charms on our adolescent children has now become the order of the day. They are being used as instruments of destruction and therefore, much is to be done at primary level that is home & school before the situation gets out of hand. If it is not tackled at grassroots level, then violence and many crimes will continue to cripple the political and economical institutions in Nigeria.

Causes of Drug Abuse & Violence:

Drug abuse in Nigeria are caused by so many factors. Idiege et al (2009) gave the followings as factors that causes drug abuse:

i. Biological factor (from parents)

ii. Psychological factor (Mal-adjustment)
iii. Social factor (influence of peer group)
iv. Environment factor (community)
v. Personal factor (individual himself)

Ifeoma (2012): gave the followings as causes of drug abuse & violence.

i. Experiment and curiosity
ii. Mass media and advertisement
iii. Curiosity and desire to experiment for sex enjoyment
iv. Urbanization
v. Ignorance of the dangers of illegal drug use by someone.
vi. Ambition

Garba (2005), identified the use of drugs during celebrations, curiosity, emotional pressure, effect of previous use of drugs and drug depency.

Ayodike et al (2012): identified unemployment as another notable factor that causes drug abuse.

Guidance Programme for Preventing Drug Abuse & Violence:

We have treated the causes and the ills of drug abuse and violence to any nation. The following guidance and counselling programme should be strictly adhered to in order to avert the situation to enable the youths or adolescent children develop properly and become useful to themselves and the society at large.

Planning stages:

1st Stage: Pre Contemplation Stage: Are those who often said to be "denial" it appear that progress in the change cycle requires acknowledgement of the problem, its consequences and an accurate assessment of possibilities for change and how it might occur.

2nd Stage: Contemplation Stage: Contemplators facilitate between the pros & cons of their problem behaviour and between the pros & cons of making changes in it. They are deciding whether to change but have no taken steps to do so.

3rd Stage: Preparation Stage: These are the people on the edge taking action to change and may have made a try in the past. In order to progress a commitment to take action and to set goals in need.

4th Stage: Action Stage: At this stage people are already engage in explicit activities to change.

5th Stage: Maintenance Stage: This stage involves the continued use of behaviour change activities for a long time after the action stage has begun. After this, the problem might be considered resolved.

Conuselling Strategies to Control Drug Abuse and Violence among Adolescent Children or Youths:

There are techniques in conuselling strategies which should be followed to help counsellor client learn more effective self benefiting behaviour patterns.

Akinboye (1987), suggested the following conuselling strategies:

i. The school guidance & conuselling programme should extend beyond school and reach parents, guardians and society. Idowu (1999), argued that "the counsellor cannot afford the luxury of sitting down in office expecting to get a client. He should therefore reach out to others in making himself as their helper. The parents pressure on drug abuse among youths in the society demands the help of counselling and counsellors. Especially the present situation where by violence and drug abuse is at its peak. Parents do needs the assistance of counsellor to reach out to them in the larger society.
ii. Parents and guardians should be adviced or conuselled not allow their children or wards to be influenced by their peer groups. Idowu (1999): Observed that, youths consider modeling to an importance means of learning drug abuse, youths imitate their peers and heroes. It is therefore very important to organize seminars and workshops for parents on how to counselled them on the dangers of influence of peers on drug abuse.
iii. The youths should be talked to during "career day" organized by a professional counsellor on the issue of drug use and drug abuse. This can take the services of an officer from NDLEA to be invited by a counsellor.
iv. The school guidance and counselling personnel working together with the administration should monitor the behaviour and attitude of children in school to fish out those involved in drug abuse and violence so that treatment can be employed.
v. Behaviour modification techniques can be used to help drug abusers change their attitudes from erratic to normal. (Behaviour modification is an approach in which attempt is made to change a behaviour by

modifying the environment in which it appears. Okoli, (2002), In this respect therefore, the counslilor should organize concert to depict the bad effects of drug abuse and addiction of drug.

vi. Individual counselling techniques could be adopted as a strategy for providing reality therapy to enable the drug abuser a certain pros and cons of their problem area and between the pros and cons to think of making changes in it. The counsellor discusses freely, with the drug addict thereby enabling both to understand each other fully, this will subsequently make the drug abuser to take a stand.

vii. Assertiveness techniques: After gradual avoidance of drug abuse, the client should ascertained and made declaration that he calls off.

viii. Follow up services: The counsellor should follow up all the activities in logical process and make sure the client is honest and dedicated through effective communication channels.

Recommendations

1. Parents should live an examplary life for their children to emulate and later for basic needs of their wards to prevent them for indulging in social vices that may lead to drug abuse and violence, in addition they should learn to accept facts about their children and act upon it objectively.
2. School authorities should carefully warn and counsel drug abuser against the destructives effect of drug addiction like violence.
3. Educational counsellors should employ the extensive use of individual and social counselling techniques for the treatment of identified drug users in schools and be regularly provided and incorporated into the curricular.
4. Home front counselling by counsellors to provide guidance.
5. Parents and Teachers should always watch the activities of their children as utmost priority especially if the attend the age of adolescence because it is critical and dangerous stage of human development, that if not properly monitored they might be influenced by bad eggs.
6. Community drug team should be set to both rural and urban areas to enlighten the community on the dangers of drug abuse among adolescent children.
7. Entrepreneurship programme should be established so that our adolescent children can acquire skills that will make them independent and self reliant.
   This will divert their mind towards doing positive things not negative things.

Conclusion:

Drug addiction and violence is becoming a phenomenon that needs to be tackled to a standstill. Nigeria is bedevilled with a lot of political and economical problems. Likewise security challenges and many are attributing these problems to lack of employment to our teaming youths, which makes them to engage in committing all sort of crimes and violence. Youths are the bedrock of the development of any nation because they constitute the working class and the active population of any nation. If they have problems, then that nation has problems as well. Therefore, if their problems are solved then that nation or country will not have any problems. I believed that if their problems are tackled, Nigeria will not face any security challenges.

Reference

Akinboye, J . O. (1987), Guidance and Counselling Strategies for Handling Adolescent & Youth Problems. Conference Proceedings for the 34th Annual National Conference of the Counselling Association of Nigeria. (ASSON, August, 2009).

Anyodike, N. (2012), "Entrepreneurship Development and Employment General in Nigeria, Problems and Prospects" *Universal Journal of Education and General Studies. 1 (40),88 – 102*

Daily Trust (2014), Teen Female Bombers invade *kano.* 35 (27) ,5.

Garba, A. (2001) . *Development and Validation of Alcohol and CANNA BIS Use Identification Instrument for Counsellors Use among Sec. School Students in* Kano. Unpublished Thesis, A.B.U Zaria, Nigeria.

Garba, A. (2005), *Substance Use and Abuse. A handbook for School Counsellors and Teachers.* Kano: Debis Co press & Publishing Company

Idowu, S. (1999), Basic of Guidance and Counselling Ibadan, Signal Educational Services.

Idiege, E. D. (2009) "Counselling Youth against Drug Abuse. Implication on Human Development" Conference Proceedings for the 34th National Counselling Association of Nigeria, (ASSON).

Ifeoma, M. B. U. (2012), "Consequences of Drug Abuse Dependence on Adolescent Development". *Journal of Counselling and Communicate 2 (4.),21 – 32 Counselling Association of* Nigeria, Anambra Nigeria.

Jibril, T. A. (2002), *Analysis of National and Abnormal Behaviour Manifestation among Nursery School Pupil*s in *Kano Metropolis.* An Unpublished Maters Degree Thesis, Bayero University, Kano.

Okoli, O. E. (2002), *Techniques of Behaviour Modification. Lagos: Behenu Press and Publishers, , Nigeria.* .

DEVELOPMENT OF ASSESSMENT INSTRUMENTS HIGHER ORDER THINKING SKILLS ON SCIENCE SUBJECTS FOR STUDENT GRADE EIGHT JUNIOR HIGH SCHOOL

Khoiriah
Science Education Master Department, Lampung University, Indonesia
khoiriahspd74@gmail.com

Tri Jalmo
Dr., Science Education Master Department, Lampung University, Indonesia
jalmotri@yahoo.com

Abdurrahman
Dr., Science Education Master Department, Lampung University, Indonesia
abeunila@gmail.com

ABSTRACT
This study aims to produce an assessment instrument that meets the eligibility criteria as a higher order thinking skills (HOTS) assessment instrument. The research procedure adapted from the R & D model refers to Gall, et al. (2003). The design of the main field test study used pre-experimental type one-shot case study. Subjects involving 174 students of grade nine at Junior High School in Bandar Lampung at Lampung Province, Indonesia with random sampling technique. The eligibility criteria for HOTS assessment instruments were collected using theoretical validation sheet and empirical validity. Data analysis is done by descriptive statistic and anates program. The result of data analysis show theoretical validity covering material aspect 84,00% (valid); construction 93,35% (very valid); language is 87,13% (very valid) whereas empirical validity includes the validity coefficient of 0,70 (high); reliability 0,82 (very high); difficulty level 7,50% (difficult): 77,50% (moderate): 15,00% (easy); power difference 10,00% (good) and 90,00% (sufficient); functionality of deception 67,50% (very good) and 32,50% (good).
Keywords: development, assessment instruments, higher order thinking skills, theoretical validity, empirical validity.

INTRODUCTION

Teaching competence is a basic skill that professional educators must possess. Before the teacher learning process begins the agenda by designing learning activities. One of the important aspects that should be in the planning of learning activities is to set teaching objectives. Based on the plan and the purpose of teaching teachers to carry out learning activities. To provide an overview of the learning process and progress as well as the achievement of student learning, the teacher conducts assessment or assessment. Assessment is an integral part of the overall learning process (Santrock, 2014).

Assessment provides a variety of information that can be used as a basis for decision-making on students, curriculum, learning programs, school climate, and school policy (Uno & Koni, 2014). Assessment is often used by teachers in measurement and non-measurement processes to obtain data related to student characteristics (Popham, 1995). So the quality of the assessment instrument determines the accuracy of the teacher when improving the student's learning outcomes and results (Indrastoeti, 2012).

Quality assessment tools are instrumental in helping the learning process, identifying the strengths and weaknesses of learning, assessing the effectiveness of the learning strategies used, and providing data to assist students in making decisions to improve behavior and learning environments (Kusairi, 2012). The assessment approach now focuses more on getting students thinking, reasoning, and taking an active role in learning, not just looking at things that students remember or report or simply show students to perform calculations or be able to perform the procedures correctly (Mardapi & Andayani, 2012).

Changes in the focus of assessment standards have changed the way the world views the world of science. Science today is no longer only seen as a science but is also needed as something that can be used to survive (NRC, 1996). Therefore, in order to prepare students to face the challenges of life in the future, the objectives of the assessment of science learning lead to a more productive thinking that encompasses critical and creative thinking as well as developing higher order thinking skills (HOTS) (NRC, 2003).

HOTS development in learning can train students accustomed to thinking HOTS (Saido, et al., 2015). HOTS encourages students to apply knowledge and skills in new contexts, use new information and "manipulate" information to reach possible answers to new situations, and enable students to store information and implement real-world solutions (Brookhart, 2010; Heong, et al., 2011; Ramos, et al., 2013).

Taxonomy Bloom revised is fundamental to the development of thinking skills. Cognitive domain of remembering (C1), understanding (C2), and applying (C3) in Taxonomy Bloom revised including lower order thinking skills (LOTS) while HOTS covers the cognitive domain of analyzing (C4), evaluating (C5), and creating (C6) (Anderson & Krathwohl, 2001). However, the development of HOTS in science learning has not been optimal, more oriented teachers develop LOTS than HOTS (Depdiknas, 2008; Khoiriah, 2017). This situation has had an impact on the low achievement of science students in several countries around the world, as reflected by the results of the analysis of the achievement of science students of grade eight Junior High School as released by the 2015 TIMSS (Trends in International Mathematics and Science Study) mapping study showing 15 out of 49 participating countries are in a position below the international average score below 500 and Indonesia is ranked 36 (IEA, 2016).

The not yet optimal development of HOTS in science learning is a manifestation of the weak competence of science teachers to prepare HOTS assessment instruments. As the data shows most of the science-made science question items are cognitive landings of C2 (81,82%) and a small part including the C4, C5, C6 cognitive domain of 9,09% - 18,18% (Khoiriah, 2017). This data proves that science teachers have difficulties when composing HOTS assessment instruments.

The form of HOTS assessment instruments may be multiple choice items (Kubiszyn & Borich, 2013). HOTS assessment instrument preparation technique is almost the same as LOTS, only because students are tested in cognitive domain analyze, evaluate, and create then there must be component or stimulus that can be analyzed, evaluated and created (Devi & Widjajanto, 2011). The stimulus of the HOTS assessment instrument may take the form of a reading source, case, image, graph, photograph, formula, table, list of words or symbols, samples, films or sounds recorded (Brookhart, 2010). In addition, HOTS assessment instruments are non-algorithmic, complex, have many solutions, involving variations in decision making and interpretation, applying many criteria, and requiring much resolving (Resnick, 1987).

Based on the above problems, the authors have conducted research on the development of HOTS assessment instruments that meet the eligibility criteria as a HOTS assessment instrument based on theoretical validity and empirical validity.

METHOD

Research Stages

This research is a development research using research and development (R & D) procedure which refer to Gall, et al., (2003). This research adapts 7 out of 10 stages of R & D model Gall, et al., (2003): (1) research and information gathering, (2) planning, (3) initial product development, (4) expert team testing, 5) revision of initial product test results, (6) main field testing, (7) revision of main field test results, (8) operational field tests, (9) revisions of operational field test products, and (10) implementation and dissemination .

Research and information gathering stages include literature studies and field studies. The literature study was conducted to obtain the data as the theoretical foundation in strengthening the argumentation for the product of the development result while the field study aimed to obtain data related to the knowledge and experience of the teacher compile the HOTS assessment instrument. The planning stage covers the design of the HOTS assessment instrument. The testing phase of the expert team involves a team of expert science assessments and evaluation experts with the focus on theoretical validation testing. The main field testing stage focuses on the empirical validation test of the initial product.

Product Development Results

The product of development in this research is HOTS assessment instrument in the form of multiple-choice items on human circulation system for grade eight at Junior High School (Kubiszyn & Borich, 2013) students. The HOTS assessment toolkit consists of 20 items on HOTS package A and 20 items on HOTS package B with cognitive domain analyzing (C4), evaluating (C5), and creating (C6) (Anderson & Krathwohl, 2001; Brookhart, 2010; (Cognitive), which includes factual knowledge (K1), conceptual knowledge (K2), procedural knowledge (K3) and knowledge of metacognition (K4) (Anderson & Krathwohl, 2010).

Eligibility Criteria for HOTS Assessment Instrument Development Results

The quality of the HOTS assessment instrument's feasibility assessment is ensured through theoretical validity and empirical validity. Theoretical validity includes material aspects of "valid" categories, "valid" categorized construction aspects and "valid" categories of language aspects, while empirical validity includes the validity of the item with minimal "sufficient" interpretation, reliability with "high" interpretation, the difficulty level with the proportion of 15% easy: 80% moderate: 5% difficult, and distinguishing power with minimal interpretation "enough" and 80% of the deception are "good" (Nofiana, et al., 2016).

Data Collection Technique and Data Analysis

The data of this research include qualitative and quantitative data. Qualitative data obtained from the results of expert team test assessment while quantitative data from the initial field test results of the initial product.

Qualitative data collection is done by using theoretical validation sheet. The theoretical validity sheet is a list of likert-scale questions so the team of experts only gives checklist (√) marks on the "1 (invalid)", "2 (less valid)", "3 (simply valid)", "4 (valid)" , and "5 (very valid)" in the available column according to the assessment then gives the final conclusion by circling one of the options of LD (feasible to use), LDP (feasible to use with improvement), or TDL (not worth using) (Table 1). Based on the choice of expert team assessment is done percentage calculation, then the data interpreted using validation criteria according to Ratumanan, et al. (2009) (Table 2).

Expert team assessment results are used as a basis for revising the initial product. If based on the calculation using the content validity ratio (CVR) formula shows the validity number is less than the minimum limit of 0,60 then the initial product must be revised again. After the initial product is revised then the expert test returns to obtain a validity price of at least 0,60 or 2 expert validators interpret "LD (feasible use)" (Ratumanan, et al., 2009).

Table 1. Theoretical Validity Sheet HOTS Assessment Instrument Result of Development

Rated Aspect	Indicator	Assessment Scale/Item				
		1	2	3	4	5
Material	1. Conformity of item with the indicator.					
	2. Linkage distractor with the subject matter.					
	3. Conformity of the item with the type of school or grade level.					
	4. The suitability of the item with the HOTS cognitive domain tested.					
	5. There is only one answer key.					
	6. The conclusion of material aspect validation.	LD		LDP		TDL
Construction	1. The subject matter is formulated clearly and firmly.					
	2. Choice of answers is homogeneous and logical.					
	3. The subject matter does not provide a clue to the key answer.					
	4. The subject matter does not contain double negative statements.					
	5. The length of the formula is relatively the same answer.					
	6. The choice of numerical answers is arranged chronologically.					
	7. Pictures, graphs, tables, diagrams, and discourses on the matter are clear and functional.					
	8. The item does not depend on the previous answer.					
	9. The instructions for working on the problem clearly.					
	10. There is a scoring guide.					
	11. Each subject has a stem that students will use to think HOTS.					
	12. Conclusion of construction aspect validation.	LD		LDP		TDL
Language	1. Grammar and spelling in accordance with Indonesian rules.					
	2. The language used in accordance with the level of student development.					
	3. The conclusion of language validation.	LD		LDP		TDL

Table 2. Criteria for Achieving CVR Validation

Percentage	Criteria
21,00 – 36,00	Invalid (IV)
37,00 – 52,00	Less Valid (LV)
53,00 – 68,00	Simply Valid (SV)
69,00 – 84,00	Valid (V)
85,00 – 100,00	Very Valid (VV)

(Source: Ratumanan, et al.,2009)

Quantitative data collection aims to obtain initial empirical product validity data measured through analysis of student response responses in terms of item validity, reliability, difficulty level, distinguishing power, and function permit. The design of the study on the main field test using the pre-experimental designs type one-shot case study that is by giving the initial product in one group of 174 students of grade nine at Junior High School in Bandar Lampung at Lampung Province, Indonesia, as shown in Table 3 (Sugiyono, 2011).

Table 3. Research Design of Main Field Test Stage

Treatment	Results
X	O

Description: X = Treatment; O = Result

The response of the students' answers on the main field test was analyzed using an anates program. The results of data analysis serve as the basis for assessment and revision of the initial product. If the result does not meet the criteria of empirical validity eligibility as HOTS assessment instrument then the revised product is then continued to conduct the 2nd major field test, and so on until the initial product is produced that meets the criteria of empirical validity as an instrument of HOTS assessment. If the main field test results have met the criteria of empirical validity eligibility as a HOTS assessment instrument then the initial product hereinafter referred to as the final product of the development result.

RESULTS

Expert Team Test Results

The recapitulation result of the theoretical validity interpretation of the material aspects of the initial product according to the validation criteria (Table 4).

Table 4. Interpretation of Theoretical Validity Aspects of Initial Product Material

Number Item	Amount Question	Validation Accomplishment (%)	Criteria
Package A			
1, 2, 5, 6, 7, 8	6	88,00 – 96, 00	VV
3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	14	72,00 – 84,00	V
Package B			
5, 6, 7, 8, 11, 12, 13	7	88,00 – 92,00	VV
1, 2, 3, 4, 9, 10, 14, 15, 16, 17, 18, 19, 20	13	72,00 – 84,00	V
Average Validation Accomplishment (%)		**84,00**	**V**

Description: VV = Very Valid; V = Valid

Based on Table 4 when referring to validation achievement criteria according to Ratumanan, et al. (2009), then the theoretical validity of the initial product material aspect can be declared "valid".

The result of recapitulation of the theoretical validity interpretation of the construction aspects of the initial product according to the validation criteria (Table 5).

Table 5. Results of Interpretation of Theoretical Validity of Early Product Construction Aspects

Number Item	Amount Question	Validation Accomplishment (%)	Criteria
Package A			
1 – 20	20	85,00 – 99,09	VV
Package B			
1 – 20	20	84,54 – 99,00	VV
Average Validation Accomplishment (%)		**93, 35**	**VV**

Description: VV = Very Valid

Based on Table 5 when referring to validation achievement criteria according to Ratumanan, et al. (2009), then the theoretical validity of the initial product construction aspect can be stated "very valid".

The recapitulation result of the theoretical validity interpretation of the language aspects of the initial product according to the validation criteria (Table 6).

Table 6. Interpretation of Theoretical Validity Aspects of Early Product Languages

Number Item	Amount Question	Validation Accomplishment (%)	Criteria
Package A			
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20	19	85,00 – 95,00	VV
17	1	80,00	V
Package B			
1, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	17	85,00 – 100,00	VV
2, 6, 8	3	75,00 – 80,00	V
Average Validation Accomplishment (%)		**87,13**	**VV**

Description: VV = Very Valid; V = Valid

Based on Table 6 when referring to validation achievement criteria according to Ratumanan, et al. (2009), then the theoretical validity of the initial product language aspect can be expressed "very valid".

Main Field Test Results

The results of quantitative data quantitative analysis, reliability, difficulty, distinguishing, and derivative functions of the initial product can be seen in Table 7, Table 8, Table 9, and Table 10.

Table 7. Results of Recapitulation of Data Validity and Reliability of Initial Product Item

Package Item	Amount Question	Validity Item		Reliability Item	
		Coefficient of Validity	Validity Criteria	Reliability Coefficient	Criteria for Reliability
A and B	40	0,70	High	0,82	Very high

Based on Table 7 it can be stated that the initial product has "high" validity criteria and "very high" reliability.

Table 8. Result of Data Recapitulation of Level of Problem of Initial Product Item

No.	Criteria for Tribune	Number Item	Amount Question	(%)
1.	0,00 s.d 0,25 (difficult)	**Package** A = 8, 13	3	7,50
		Package B = 8		
2.	0,26 s.d 0,75 (Moderate)	**Package** A = 1, 3, 4, 5, 6, 7, 9, 11, 12, 14, 15, 16, 17, 18, 19	31	77,50
		Package B = 1, 3, 4, 5, 6, 7, 9, 11, 12, 13, 14, 15, 16, 18, 19, 20		
3.	0,76 s.d 1,00 (Mudah)	**Package** A = 2, 10, 20	6	15,00
		Package B = 2, 10, 17		

Based on Table 8 it can be seen that more than half of the initial product has a difficulty level of " moderate " criteria and a small number of "difficult" and "easy" categories.

Table 9. Results of Recapitulation of Differential Power Data of Initial Product Item

No.	Criteria Distinct Power	Number Item	Amount Question	(%)
1.	≥ 0,50 (Good)	**Package** A = 6	4	10,00
		Package B = 4, 11, 18		
2.	0,20 s.d 0,49 (Enough)	**Package** A = 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	36	90,00
		Package B = 1, 2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 19, 20		

Based on Table 9 it is revealed that almost all initial product differentiation power is categorized as "enough" and only a few criteria are "good".

Table 10. Result Recapitulation of Data Deception Function Item of Initial Product

No.	Criteria Deception Function	Number Item	Amount Question	(%)
1.	Very good	**Package** A = 1, 4, 5, 6, 7, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20	27	67,50
		Package B = 2, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 19		
2.	Good	**Package** A = 2, 3, 8, 9, 12	13	32,50
		Package B = 1, 3, 4, 12, 13, 17, 18, 20		

Table 10 shows more than half of the items in the original product having the cluster functioning "very good" and only a small portion functioning "good".

DISCUSSION

This development research aims to produce an assessment instrument that meets the criteria as a HOTS assessment instrument. The feasibility of the HOTS assessment instrument is guaranteed by theoretical validity and empirical validity. This is confirmed by Kartowagiran, et al. (1999) the quality of HOTS assessment instruments can be seen in terms of theoretical and empirical. As the results of the research Nofiana et al. (2016) describe the assessment instrument as a HOTS assessment instrument if it has the validity criteria of the "valid" material aspect, the "valid" construction aspect and the "valid" language aspect and the empirical validity with the validity criteria of item "intermediate", reliability of "high" interpretation, 15% easy proportion 15% difficulty: 80% moderate: 5% difficult, and distinguishing power interpreted to be minimal "enough" and 80% of deception are "good".

The material aspect test by the expert team was conducted to determine the material feasibility of the assessment instrument (Kartowagiran, 2011b). Material validity includes the alignment of instrument materials with learning indicators (Kartowagiran, 2012). The validity of the instrument material is related to the suitability and competence representation that must be achieved by the students so that the instrument improvement process must be done (Hendryadi, 2014). This is in line with Matondang (2009) to examine the question or revelation of the instrument needs to be done in order to obtain adequate quality question device.

The validity of the instrument material is determined by the justification of the experts (Istiyono, et al., 2014; Santyasa, 2005; Listyani & Hidayati, 2010; Muljono, 2007; Raisanen, et al., 2016). In this regard, the expert team has specifically provided suggestions for improvement, and then performed the process of improvement until the average achievement of theoretical validity of material material aspects of 84,00% then theoretically the material aspects of the HOTS assessment instrument development results categorized as "valid" (Ratumanan , et al., 2009).

The material aspect of the development result instrument is categorized as "valid" to reveal the set matter that has been compiled in accordance with the subject matter that must be achieved by the students at its level. As Arikunto (2011); Ramadhani, et al. (2014) describes the validity of instrumental material is said to be "valid" is able to measure the specific objectives of learning and in accordance with indicators in basic competencies. The "valid" category of the HOTS development assessment instrument proves that the instrument meets the eligibility criteria as a HOTS assessment instrument (Nofiana, et al., 2016).

In addition to meeting the eligibility criteria of material validity, assessment instruments must also be tested in construction (Sugiyono, 2011). The validity level of instrument construction can be known by reviewing the composition of the item. Testing the quality of theoretical validity of the construction aspects of the assessment instrument can be done by referring to the writing of the question and through the assessment of expert teams (Amarila, et al., 2014; Mardapi, 2003; Kartowagiran, 2012).

Based on the results of the assessment of the expert team of HOTS assessment instrument construction aspects of the development results show the average validation achievement of 93,35%. This data proves the construction aspects of categorized instruments as "very valid" (Ratumanan, et al., 2009) and reveals that the HOTS development assessment instrument has exceeded the eligibility criteria for HOTS assessment instruments (Nofiana, et al., 2016).

When composing an assessment instrument, language validity should also be given attention. This is in harmony with Rahayu, et al. (2014) that language validity aims to determine the accuracy of language usage in instrument devices. Moreover, if assessment instruments require a high level of reasoning, such as HOTS-oriented assessment instruments. As Sunarti & Rahmawati (2014) describes the language used in the assessment instrument must be communicative, in accordance with the Indonesian grammar and spelling rules, as well as the level of student development.

With regard to the language aspects of the HOTS assessment instrument, the result of the development of a team of experts has provided suggestions for improvement so that students can easily understand the questions and the answers asked to be clear. Based on the evaluation result of the expert team on the instrument language aspect shows the average validation achievement of 87,13% means that the instrument is categorized as "very valid" (Ratumanan, et al., 2009). Thus the HOTS assessment instrument of development result is stated to have eligibility criteria as a HOTS assessment instrument (Nofiana, et al., 2016).

After the material aspects, construction, and instrument language of development result meet the eligibility criteria as HOTS assessment instrument, then the instrument is tested on 174 students of grade nine at Junior

High School in Bandar Lampung at Lampung Province, Indonesia to know the quality of the empirical validity of the instrument. As Kartowagiran, et al. (1999); Lababa (2008); Kartowagiran (2011a) confirms to produce high-quality test questions, so in addition to tested theoretically also need to be tested empirically.

The question device is said to be of good quality if it has empirical validity including the coefficient of validity and reliability, distinguishing power, difficulty level, and distribution of choice of answer or deceiver (Ramadhani, et al., 2014; Budiman & Jailani, 2015). Empirical validity is obtained through test results (Matondang, 2009). Testing the problem is an effort to know the quality of questions based on the response of the test participants (Kartowagiran, 2012).

Based on the results of responses responses students obtained the value of the coefficient of validity and reliability of HOTS assessment instrument results of 0,70 and 0,82 respectively. Referring to the criteria of validity and reliability coefficients, the instruments are categorized as "high" and have "very high" reliability (Arikunto, 2011). Interpretation of the validity and reliability of the HOTS assessment instrument of the development results proved to exceed the minimum threshold of the eligibility criteria as HOTS assessment instruments. As the results of Nofiana's research, et al. (2016) asserted that the assessment instruments meet the eligibility criteria as HOTS assessment instruments if they have a validity of at least " sufficient " interpretation and minimum "high" interpretation reliability.

The above facts are similar to Mardapi (2003) that the instrument is said to have a reliability index or "good" reliability if the reliability coefficient index is at least 0,70. Furthermore, Dwipayani (2013) also describes the matter of the declared device of good quality if it has a high validity and reliability index.

The high level of validity and reliability of the problem due to HOTS assessment of development results has been through the justification process of the expert team. This fact proves the process of improving the HOTS assessment instrument of development results in accordance with the direction and suggestions of improvement from the expert team (Raisanen, et al., 2016; Amarila, et al., 2014).

In addition to the validity and reliability coefficients, the quality of the assessment instrument is also supported by the level of difficulty, distinguishing factor, and effectiveness of the deception function (Kartowagiran, 2012). Preparation of the questioning device should consider the level of difficulty in order that the results achieved can illustrate actual student achievement (Dwipayani, 2013). The analysis of the difficulty level is important because it can examine problems that are easy, moderate, and difficult to balance the proportion of easy, moderate, and difficult categorical problems in assessment instruments (Wardany, et al., 2015).

Based on the results of the response analysis of students can be known the level of difficulty of HOTS assessment instrument development results show from total 40 items tested there are 3 items (7,50%) range of 0,00 to 0,25 classified as "difficult", 31 items (77,50%) ranged from 0,26 to 0,75 with " moderate " criteria, and 6 item points (15%) ranged from 0,76 to 1,00 in "easy" categories. The proportion of difficulty level of HOTS assessment instrument of this development result proved in harmony with the results of Nofiana research, et al. (2016) stating that the assessment instrument is eligible as a HOTS assessment instrument if it has a 15% easy proportion of difficulty: 80% moderate: 5% difficult.

Furthermore, the difficulty level of the HOTS assessment instrument of development result is including the assessment instrument with the "good" item quality. As Mardapi (2003) asserts that the "good" item has an index of difficulty levels of between 0,30 and 0,80. Even Arikunto (2011) further emphasized that the item "good" is a matter that is not too easy and not too difficult.

Analyzing the feasibility of differentiating power in the assessment instrument needs to be done. This is because analyzing the differentiator is an activity to examine the items to know the ability of students in solving the problem (Uno & Koni, 2014). Further Rofiah, et al. (2013); Suwarto (2011) explained that analyzing the differentiation of the problem means measuring the ability of the item to distinguish between high and low group students based on certain criteria.

Furthermore, based on the results of data analysis of responses of students revealed also the difference in power index HOTS assessment results of development is 4 items (10%) has a different power coefficient ≥ 0,50 "good" criteria and 36 items (90%) coefficient power difference between 0,20 – 0,49 is "sufficient". Or the average of the differentiating power coefficient of 0,43 with "sufficient" criteria means that the items in the HOTS assessment instrument of development outcome are acceptable and stated to have satisfied the eligibility criteria as HOTS assessment instruments (Nofiana, et al., 2016). This is as supported by Yusuf (2015) and Mardapi

(2003) that the items that have differentiating power are "sufficient" to mean that the item is of good quality and can be used at a later stage.

The quality of multiple-choice items is tested when it comes to the quantitative analysis of the effectiveness of the deception function (Mardapi, 2003). Referring the results of the analysis of the fool function revealed the HOTS assessment instrument of the development result there are 27 items (67,50%) have the duties function "very good" and 13 item (32,50%) function "good". This data reveals the distribution of choice of answers in the question device has performed its function well as a deception and deserves to be declared as HOTS assessment instrument. As the results of Nofiana's research, et al. (2016) report assessment instruments are HOTS-certified if 80% of deception are "good". Further Rofiah, et al. (2013) describes a good performer when selected by 5% of test takers.

CONCLUSION

Based on the result of research and development it is concluded that the HOTS assessment instrument of development result has fulfilled the eligibility criteria as HOTS assessment instrument, that is the validity of the theoretical aspects of the material "valid" category, categorized construction is "very valid", and the language aspect is "very valid" while empirical validity has coefficient validity about 0,70 is "high", reliability is 0,82 "very high", difficulty level is 7,5% difficult: 77,5% moderate: 15% easy, distinguishing power equal to 0,43 classified criteria "enough", the effectiveness of the deception of 67,50% works "very good" and 32,50% works "good".

REFERENCES

Amarila, Raula Samsul., Habibah, Noor Aini., & Widiyatmoko, Arif. (2014). Pengembangan Alat Evaluasi Kemampuan Berpikir Kritis Siswa pada Pembelajaran IPA Terpadu Model Webbed Tema Lingkungan. *Jurnal Pendidikan Universitas Negeri Semarang.* 3(2),563-569.

Anderson, L.W., & Krathwohl, D. R. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* Allyn dan Bacon. Addison Wesley Longman. New York. (2010). *Kerangka Landasan untuk Pembelajaran, Pengajaran, dan Asesmen.* Pustaka Pelajar. Yogyakarta.

Arikunto, Suharsimi. (2011). *Dasar-Dasar Evaluasi Pendidikan*. Bumi Aksara. Jakarta.

Budiman, Agus., & Jailani. (2015). Developing An Assessment Instrument of Higher Order Thinking Skills (HOTS) in Mathematics for Junior High School Grade VIII Semester 1. *Proceeding of International Conference on Research, Implementation, and Education of Mathematics and Science.*

Brookhart, Susan M. (2010). *How to Assess Higher Order Thinking Skills in Your Classroom.* Alexandria, Virginia. The USA.

Clark, D. (2010). *Bloom's Taxonomy of Learning Domains: The Three Types of Learning.* Retrieved from http://www.nwlink.com/~donclark/hrd/bloom.html.

Depdiknas. (2008). *Strategi Pembelajaran Matematika dan Ilmu Pengetahuan Alam.* Direktorat Jendral Peningkatan Mutu Pendidik dan Tenaga Kependidikan. Departemen Pendidikan Nasional. Jakarta

Devi, Poppy Kamalia., & Widjajanto T, Erly Tjahja. (2011). *Instrumen Penilaian Hasil Belajar IPA High Order Thinking*. P4TKIPA. Bandung.

Dwipayani, Anak Agung Sri. (2013). Analisis Validitas dan Reliabilitas Butir Soal Ulangan Akhir Semester Bidang Studi Bahasa Indonesia Kelas X SMA Terhadap Pencapaian Kompetensi. *Jurnal Pendidikan.*1-18.

Gall, P. M., Gall, J.P., & Borg, W.R. (2003). *Educational Research An Introduction. Seventh Edition.* University of Oregon, Boston. New York.

Hendryadi. (2014). Validitas Isi. *Teori Online Personal Paper.*1(6), 1-5.

Heong, Y.M., Othman, W.D., Md Yunos, J., Kiong, T.T., Hassan, R., & Mohamad, M. M. (2011). The Level of Marzano Higher Order Thinking Skills Among Technical Education Students. *International Journal of Social and Humanity.*

Indrastoeti, Jenny. 2012. *Pengembangan Asesmen Pembelajaran*. UPT UNS Press. Surakarta.

International Organization for Evaluation of Educational Achievement(IEA). (2016). *Annual Report.* Retrieved 26 April, 2017 from www.iea.org.

Istiyono, Edi., Mardapi, Djemari., & Suparno. (2014). Pengembangan Tes Kemampuan Berpikir Tingkat Tinggi Fisika (PysTHOTS) Peserta didik SMA. *Jurnal Penelitian dan Evaluasi Pendidikan Universitas Negeri Yogyakarta.* 18(1), 1-12.

Kartowagiran, Badrun. (2011a). Item and Test Analysis (Iteman). *Makalah Pelatihan Asesmen Pembelajaran Bagi Dosen Muda UPI*. Pascasarjana UNY. Yogyakarta.

_____. (2011b). Pengembangan Instrumen Asesmen Pembelajaran di Sekolah Bertaraf Internasional. *Makalah Penyusunan Bahan Ajar dalam Sertifikasi*. UIN Sunan Kalijaga. Yogyakarta.
_____. (2012). Penulisan Butir Soal. *Makalah Pelatihan Penulisan dan Analisis Butir Soal Bagi Sumber Daya PNS Dik-Rekinpeg*. Jakarta.
Kartowagiran, Badrun., Mardapi, Djemari., Subali, Bambang., Suyata, Pujiati., & Sriati, Arti. (1999). Peningkatan Kemampuan Menyusun dan Menganalisis Soal Tes Bagi Guru SMP Se D.I. Yogyakarta. *Jurnal Inoteks*. 1(1), 35-40.
Khoiriah. (2017). Prosiding Seminar Nasional Membangun Profesionalisme Guru Pendidikan Dasar Dalam Era Global. Jakarta.
Kubiszyn, Tom., & Borich, Gary. (2013). Educational Testing and Measuring: Classroom Application and Practice. *John Wiley and Sons, Inc.* The United State of America.
Kusairi, Sentot. (2012). A Computer-Assisted Analysis of Physics Formative Assessment For Senior High Schools. *Jurnal Penelitian dan Evaluasi Pendidikan.*69-87.
Lababa, Djunaidi. (2008). Analisis Butir Soal Dengan Teori Klasik: Sebuah Pengantar. *Jurnal Iqra.*5(1), 29-37.
Listyani, E., & Hidayati, K. (2010). Pengembangan Instrumen Kemandirian Belajar Mahasiswa. *Jurnal Penelitian dan Evaluasi Pendidikan.*
Mardapi, Djemari. (2003). *Bahan Lokakarya Metodologi Interaksi Pembelajaran.* Universitas Muhammadiyah Surakarta. Jawa Tengah.
Mardapi, Djemari., & Andayani, Sri. (2012). Performance Assessment dalam Perspektif Multiple Criteria Decision Making. *Prosiding Seminar Nasional Penelitian, Pendidikan dan penerapan MIPA UNY.*
Matondang, Zulkifli. (2009). Validitas dan Reliabilitas Suatu Instrumen Penelitian. *Jurnal Tabularasa Program Pascasarjana Unimed.*
Muljono, Pudji. (2007). Kegiatan Penilaian Buku Teks Pelajaran Pendidikan Dasar dan Menengah. *Artikel Staf Profesional BSNP Kegiatan Penilaian Buku Teks Pelajaran*.
Narayanan, Sowmya., & Adithan, M. (2015). Analysis of Question Papers in Engineering Courses With Respect to HOTS (Higher Order Thinking Skills). *American Journal of Engineering Education.*6(1), 1-10.
Nofiana, Mufida., Sajidan., & Karyanto, Puguh. (2016). Pengembangan Instrumen Evaluasi Higher Order Thinking Materi Kingdom Plantae. *Jurnal Pedagogi Hayati Program Studi Pendidikan Sains Pascasarjana Universitas Sebelas Maret.*
National Research Council. (1996). *National Science Education Standards.* National Academy Press. Washington, D.C.
_____. (2003). *National Science Education Standards*. National Academy Press. Washington, D.C.
Pappas, E., Pierrakos, O., & Nagel, R. (2012). Using Bloom's Taxonomy to Teach Sustainability in Multiple Contexts. *Journal of Cleaner Production.*
Popham, W. James. (1995). *Classroom Assessment: What Teacher Need to Know.* Allyn and Bacon. Los Angeles.
Rahayu, Septri., Akhsan, Hamdi., & Zulherman. (2014). Pengembangan Panduan Praktikum Perangkat Gelombang Mikro Materi Gelombang Elektromagnetik. *Jurnal Pendidikan*. 171-178.
Raisanen, Milla., Tuononen, Tarja., Postareff, Lissa., Hailikari, Telle., & Virtanen, Viivi. (2016). Students and Teacher Experiences of The Validity and Reliability of Assessment in a Bioscience Course. *Journal of Higher Education Studies*.6(4), 181-189.
Ramadhani, Martha Candra., Kantun, Sri., & Widodo, Joko. (2014). Analisis Validitas dan Tingkat Kesukaran Soal Latihan Evaluasi Akhir Tahun pada Buku Sekolah Elektronik (BSE) Mata Pelajaran Ekonomi SMA/MA Kelas XI. *Jurnal Artikel Hasil Penelitian Mahasiswa Universitas Jember.*1-7.
Ramos, J.L.S., Dolipas, B.B., & Villamor, B.B. (2013). Higher Order Thinking Skills and Academic Performance in Physics of College Students: A Regression Analysis. *International Journal of Innovative Interdisciplinary Research.*
Ratumanan, T.G., Laurens, T., & Mataheru, W. (2009). Pengembangan Model Pembelajaran Interaktif dengan Setting Kooperatif Model PISK. *Jurnal Matematika.*
Resnick, L.B. (1987). *Education and Learning to Think.* National Academy Press. Washington, DC.
Rofiah, Emi., Aminah, Nonoh Siti., & Ekawati, Elvin Yusliana. (2013). Penyusunan Instrumen Tes Kemampuan Berpikir Tingkat Tinggi Fisika Siswa SMP. *Jurnal Pendidikan Fisika.*1(2), 17-22.
Saido, Gulistan Mohammed., Siraj, Saedah., Nordin, Abu Bakar Bin., & Al Amedy, Omed Saadallah. (2015). Higher Order Thinking Skills Among Secondary School Students in Science Learning. *Journal of University Malaya.*3(4), 16-30.
Santrock, John W. (2014). *Psikologi Pendidikan Buku 2*. Edisi 3. Salemba Humanika. Jakarta.
Santyasa, I Wayan. (2005). *Analisis Butir dan Konsistensi Internal Tes.* Disajikan dalam Workshop Bagi Pengawas dan Kepala Sekolah Dasar Kabupaten Tabanan. Bali.
Sugiyono. (2011). *Metode Penelitian Kuantitatif , Kualitatif dan R&D.* Alfabeta. Bandung.

Sunarti & Rahmawati, Selly. (2014). *Penilaian dalam Kurikulum 2013.* Andi. Yogyakarta.
Suwarto. (2011). Teori Tes Klasik dan Teori Tes Modern. *Jurnal Widyatama*. Universitas Veteran Bangun Nusantara. Sukoharjo.
Uno, Hamzah B., dan Koni, Satria. 2014. *Assessment Pembelajaran.* Bumi Aksara. Jakarta.
Wardany, Kusuma., Sajidan., & Ramli, Murni. (2015). Penyusunan Instrumen Tes Higher Order Thinking Skill Materi Ekosistem SMA Kelas X. *Jurnal Biologi, Sains, Lingkungan dan Pembelajarannya.*SP-001-289:538-543.
Yahya, A.A., Toukal, Z., & Osman, A. (2012). Bloom's Taxonomy Based Classification for Item Bank Questions Using Support Vector Machines. *In Modern Advances in Intelligent System and Tools.* Springer. Berlin, Germany.
Yusuf, A. Muri. (2015). *Asesmen dan Evaluasi Pendidikan.* Prenadamedia Group. Jakarta.

EFFECT OF INFORMAL COOPERATIVE LEARNING STRATEGY IN BIOLOGY ACHIEVEMENT ON LEARNERS OF DIVERSE ABILITY

Sangeeta Yaduvanshi
Faculty of Education, Banaras Hindu University, Varanasi – 221005 (UP), India
sangeetayduvanshi@gmail.com

Associate Professor Dr. Sunita Singh (**Corresponding Author)**
Faculty of Education, Banaras Hindu University, Varanasi – 221005 (UP), India
sunitasingh.bhu04@gmail.com

ABSTRACT
The present study explored the effect of Informal cooperative learning on performance of lower, average and higher achievers ninth grade Biology students. An experimental research design with equivalent group was used. A school was purposively selected and two groups were formed by random distribution of students in two groups. The groups were equated on the basis of intelligence and previous academic achievement scores. The sample consisted of 62 participants out of them 30 students constitute the experimental group and was taught using cooperative learning strategy (CLS) while 32 students comprises the control group taught using traditional teaching methods. Pre- and post-tests were used to collect data. Data were analysed using inferential statistics: independent student t-test and analysis of covariance (ANCOVA). The results of the present study showed that the experimental group outperformed to control group suggesting that CLS enhanced performance of lower, average and high achievers more than the traditional teaching approach.
Keywords: Student, achiever, Biology achievement test (BAT), cooperative learning, cognitive domains

INTRODUCTION

Cooperative learning has emerged as a new approach to classroom teaching in recent years. The approach is now accepted and preferred instructional procedure at all the levels of education in most of the western countries. Mostly used and widely accepted definition of cooperative learning is proposed by Johnson and Johnson (1999), they defined "cooperative learning is the instructional use of small groups in which students works together to maximize their own and each other's learning." It is group learning activity organized in such a way that learning is dependent on the socially structured exchange of information between learners in group.It is a teaching strategy in which students work cooperatively in small groups in order to enhance their own and their peers' learning (Abrami, Poulsen & Champer, 2004). The method of cooperative learning is characterized by the positive dependence to accomplish shared learning goal, engagement in face-to-face promotive interactions, equal involvement and definite roles, to develop appropriate collaborative and interpersonal skills and assess the effectiveness of group functioning for future learning (Johnson & Johnson, 1999; Kagan, 1994). Thus, cooperative learning is not simply a synonym for students working in groups. Any group activity cannot be considered as cooperative learning until and unless it comprises five essential elements that are positive interdependence, individual accountability, face-to-face promotive interaction, collaborative skills and group processing skills (Johnson et al., 1998). It is a theoretically validated teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Many of research studies pointed out the benefits CLS on students' learning, academic achievement, social relationships, motivation, and self-esteem (Johnson & Johnson, 2009; Johnson, Johnson, Roseth, & Shin, 2014; Slavin, 2014).

In Indian context it is commonly observed that the classes are overdriven by "teacher talk" and teaching-learning process is predominantly text-book and examination oriented. Here, teacher serves as pipelines for source of knowledge and seek to transfer their knowledge and idea to passive students. They emphasize learning about answers more than an exploration of questions; promote rote memory at the cost of critical thinking process, learning of segments of knowledge alternate to understanding in context, reading in lieu of doing (Sridevi, 2008, Yaduvanshi & Singh, 2015). This type of instructional method does not allow for active participation and interaction of students in the teaching-learning process. This creates monotony in the classroom and students' lost their interest in the subject. The classrooms are generally overcrowded and single teacher has to deal with large number of students. Here teacher found very less opportunity to give individual attention to all students. As a result the gap between poor and good student increases. Since, secondary education is a keystone of the education system. This stage is crucial for deciding future career outlook of students. Student's performance in science subject predicts whether they should pursue their career in STEM or not. Generally the STEM related subjects are considered for high achievers and average and lower achievers are suggested to drop these subjects at higher secondary level. But, the objective of science education is not only

prepare the students as future scientific professions but also a mean to develop the ability of reasoning ability, inquisitiveness, creativity, reflective thinking, positive attitude and problem solving approach (NCF, 2005). These abilities and skills enable the present generation learner to face the challenges of the contemporary technological based society of 21st century. Hence, it is call of time to ensure accessibility and availability of quality science education to all. Therefore, for preparing students of today to become successful individuals of the tomorrow, teacher needs to ensure that their teaching should be effective. So, it is call of time to revisit our pedagogical practices. Cooperative learning created many learning opportunities that do not typically occur in traditional classrooms. Siti Rahayah (1998) suggested that science teachers need to use cooperative learning activities in order to enhance scientific skills and to increase achievement in science. Incorporation of cooperative learning as an alternative pedagogy in conventional science classroom is one of imperative need of modern time for making teaching-learning process more effective so that quality science education must be available and accessible for all types of students, and only to those who are good performer in science or considered as "science type" (Tanner et al., 2003). Thus, incorporation of informal cooperative learning strategies (CLS) in the classroom may seem helpful for preparing our students for successfully meet the challenges fast growing emerging scientific and technologically based society.

Many of the research studies on different discipline and different grade reported that cooperative learning has positive effect on the achievement of students. Finding of Al-Badawi (2005) and Liao (2005) also shows that this strategy has positive effect on achievement in English. Kosar (2003) investigated the impact of cooperative learning and traditional methods of teaching in social studies. Both of them concluded the supremacy of cooperative learning strategy over traditional methods of teaching. Iqbal, M. (2004), Gubbad, (2010), Muhammad, Z. (2010) & Nayak, R.K. (2011) research studies indicated that there was a statistically significant relationship between mathematics achievement and cooperative learning. Yager (1985), Miller (1992) Bowen (2000) and Arbab (2003) respectively found that cooperative learning strategy had positive effect on achievement in science. Pandey and Kishore (2003) investigated that cooperative learning strategy had effective than traditional only at knowledge level but had no significant effect at comprehension level. Most of these researches in the science were based on physical science topics and conducted on elementary levels. Studies conducted by Muraya and Kimamo (2011), Achor, Wude, Duguryil (2013) and Nnorom, (2015) also revealed that cooperative learning strategy has positive effect on Biology learning. Many of researches had been carried out in abroad regarding the effectiveness of cooperative learning on students' performance. Slavin (1991) in his meta analysis report reveal that 61% researches on cooperative learning indicated that it enhances students performance in comparison to traditional method in all main subjects, at all standard and in all diverse ability of high, average, and low achievers students. In an experimental study Kenneth and Young (1999) found that cooperative learning had no significant effect on achievement of higher achiever pre-service teachers. Likewise, Armstrong (1999) also reported that cooperative learning had slightly raised the performance of gifted students of heterogeneous group in comparison homogenous groups of gifted students. Similar, results were reported by Majoka, Saeed and Mahmood (2007) they studied on secondary school mathematics students and found STAD had no significant effect on high achievers but had significant effect on low achievers students. Thus, the study concluded that structured cooperative learning strategy is more favourable for low achievers than high achievers. Contrary to these findings of Singhanayok and Hooper (1998) and Khan (2012) showed that cooperative learning had significantly increases the academic achievement of high as well as low achiever students in science and English respectively in elementary level students. Similarly Gemechu and Abebe (2017) investigated the effect STAD method (highly structured CLS) on ninth grade students' achievement on mathematics and, demonstrated that STAD method is effective than traditional methods and it significantly increases the academic performances of lower and higher achiever students. In the study carried out by Numprasert (2006) showed that students' academic achievement scores in course BG 1202 - Science, Man, and his environment were significantly improved in higher, middle and low achiever of cooperative learning group as compared to their counterpart taught with the traditional lecture method. In contrast to findings of Numprasert (2006) and Buchs et al., (2015) research results indicated that highly structured cooperative learning had positive effect on the understanding of average-ability students on targeted task while the low and high achievers had the similar progression in experimental and control group, whereas average achievers progressed more in the highly structured condition. Analysis of the above literature revealed that almost all study suggested that CLS has positive effect on lower achievers, some of them also advocated that cooperative learning enhance the performance of high achiever or gifted and some are inconclusive regarding the significant increase in achievement of higher achievers and very little literature is available on the impact of cooperative learning on the achievement of average students. Since, maximum population of the normal classroom are belongs to the category of average performer therefore it is also important to explore the effect CLS on average achievers. Most of experiment was carried out in abroad and in most of studies structured CLS/ STAD methods were used. There is dearth of study on biological science no study had been conducted on Informal CLS and its effect diverse group of learner in Indian culture. Therefore, researcher conducted the present study to find out the

effect of informal CLS on the academic achievement of lower, average or higher achiever students of Biology at secondary level.

METHODOLOGY

An experimental design was used in present study, where school was chosen purposefully according to the need and convenience of the investigator. Researcher employed pre-test – post-test equivalent group to find out impact of informal CLS on students' achievement. The two groups were equated on the basis intelligence test scores and pretest scores. No significant difference was found in both of these tests.

SAMPLE OF THE STUDY

The total sample of 62 students was taken for the study. The students were randomly divided into two groups; experimental group comprises of 30 students taught by the Informal cooperative learning and control group which is taught by traditional lecture –cum -demonstration method. Students were categories into higher, lower and average achievers on the basis of their two successive test scores in science in previous standard.

INSTRUMENTS OF DATA COLLECTION

To fulfil the objectives of the present study, the following instruments were constructed and used to collect the relevant data:

I. BAT: Biology Achievement Test (BAT) was developed by the researcher consisting of 100 items of knowledge, understanding and applying levels of the cognitive domain of blooms taxonomy. It was validated by experts of test and measurement and three experienced Biology teachers for face and content validity. The reliability coefficient of test was calculated by using the Kuder-Richardson formula 20 and Cronbach coefficient (split half method of reliability) method, the values were found 0.67 and 0.838 respectively.

II. Layout plans on Informal CLS : The layout plans deals with the theme of organization in living world and cover four units of Class IX NCERT (National Council of Education Research and Training) science textbook include units; Cell: The fundamental unit of life, tissue, diversity in living organisms, why do we fall ill? The plans included instructional objectives, a list of materials needed, group size, assignment to roles, and arrangement of the room. The layout plans are based on Jigsaw of CLS.

III. Opinionnaire to assess the perception of students' in cooperative learning: A opinionnaire of 15 items was prepared to assess the perception of students towards cooperative learning.

EXPERIMENTATION

After the pre-test, the whole experimental group was subjected for orientation for cooperative learning for 3 days. Then treatment was Informal CLS was given investigators used different type Informal cooperative learning techniques like think- pair share, three step interview, robin round table and then gradually shifted towards Jigsaw methods of CLS. In Jigsaw CLS, the topics to be study were segmented in sub topics and member of each group was assigned a particular subtopic to learn. All members sharing the same sub topic were met together into expert groups where they discussed their content so as to master and become experts. They finally reconvened where each member explained his unit to other members of his/her group or some times to whole class as designed in lesson plan by researcher. Parallel to treatment of experimental group the control group was taught by lecture-cum-demonstration method covering the same units of Biology as in the experimental group. The lesson plans for the control group focused on same instructional objectives. After the treatment of 45 instructional periods (2 months), same BAT was administered to the students in both groups

STATISTICAL ANALYSIS

Data were analysed using IBM SPSS Statistics -20 Software for the t-test followed by one-way analysis of co-variance (ANCOVA). All values were expressed as mean (±SE). P-value < 0.05 was considered significant in the present study.

RESULTS

Independent sample t test for pre and post test of low achiever students

Pre test analysis of the low achiever student in both experimental and control group showed no significant differences in knowledge and applying levels while a significant difference were observed in understanding level and total achievement score. It indicates that the BAT score at pre level was not matched in both the group in terms of total score.

After the treatment with Informal CLS and traditional method in both the experimental and control group respectively, it has been observed that BAT score in both the group was increased but when compared with the control group the values were found to be significantly high in experimental group suggesting the positive effect of cooperative learning. The BAT score was significantly increased in knowledge level (31%, $p<0.000$), understanding level (48.21%, $p<0.000$), applying level (45.18%, $p<0.000$) and total score (39.91%, $p<0.000$ as compared to control group.

Table – 1. Independent sample t test for pre and post test of low achiever students

Tests	Variables	Group	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pre test	Knowledge	Experimental	8	9.63	1.302	.460	2.002	15	.064
		Control	9	8.44	1.130	.377			
	Understanding	Experimental	8	6.63	1.061	.375	2.651	15	.018
		Control	9	5.00	1.414	.471			
	Applying	Experimental	8	3.38	.744	.263	1.490	15	.157
		Control	9	2.89	.601	.200			
	Total Score	Experimental	8	19.63	2.326	.822	2.900	15	.011
		Control	9	16.33	2.345	.782			
Post test	Knowledge	Experimental	8	24.75	2.252	.796	4.914	15	.000
		Control	9	18.89	2.619	.873			
	Understanding	Experimental	8	20.75	2.053	.726	6.363	15	.000
		Control	9	14.00	2.291	.764			
	Applying	Experimental	8	13.88	1.553	.549	4.816	15	.000
		Control	9	9.56	2.068	.689			
	Total score	Experimental	8	59.38	4.897	1.731	6.713	15	.000
		Control	9	42.44	5.434	1.811			

Table – 2. ANCOVA of BAT scores for low achiever students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1439.234[a]	2	719.617	56.320	.000
Intercept	111.008	1	111.008	8.688	.011
Pre_Total	225.214	1	225.214	17.626	.001
Group	357.146	1	357.146	27.951	.000
Error	178.883	14	12.777		
Total	44821.000	17			
Corrected Total	1618.118	16			

a. R Squared = .889 (Adjusted R Squared = .874)

Table – 3. Estimated marginal means of low achiever students

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	56.485[a]	1.439	53.398	59.571
Control	45.014[a]	1.339	42.141	47.886

a. Covariates appearing in the model are evaluated at the following values: Pre Total Score Test = 17.88.

The ANCOVA analysis of lower achiever students indicated that F ratio at df 16 is $F_{(1, 16)} = 29.951$ and p=0.000 is significant at .0001 level. It verify our previous findings that Informal CLS significantly enhances the achievement in low achiever students. Estimated marginal means of the experimental group (56.48) is higher than control group (45.04) as given in the table – 3.

Independent sample t test for pre and post test of average achiever students

Pre test analysis of the average achiever student in both experimental and control group showed no significant differences in any of the variable and also in total BAT score. It clearly shows that the BAT score at pre level was matched in both the group as the values were not significant.

After the treatment with Informal cooperative learning the BAT score was significantly increased in knowledge level (23.17%, p<0.001), understanding level (30.43%, p<0.001), applying level (29.51%, p<0.001) and total score (27.13%, p<0.001) as compared to control group which was taught by lecture-cum demonstration method.

Table – 4. Independent sample t test for pre and post test of average achiever students

Tests	Variables	Group	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pre test	Knowledge	Experimental	14	10.36	1.692	.452	.638	27	.529
		Control	15	10.00	1.309	.338			
	Understanding	Experimental	14	7.50	1.225	.327	.053	27	.958
		Control	15	7.47	2.031	.524			
	Applying	Experimental	14	4.14	.949	.254	1.280	27	.211
		Control	15	3.67	1.047	.270			
	Total Score	Experimental	14	22.00	2.828	.756	.725	27	.475
		Control	15	21.13	3.543	.915			
Post test	Knowledge	Experimental	14	27.43	3.251	.869	4.819	27	.000
		Control	15	22.27	2.492	.643			
	Understanding	Experimental	14	23.57	2.563	.685	5.863	27	.000
		Control	15	18.07	2.492	.643			
	Applying	Experimental	14	15.71	1.773	.474	3.856	27	.001
		Control	15	12.13	3.021	.780			
	Total score	Experimental	14	66.71	5.497	1.469	6.783	27	.000
		Control	15	52.47	5.792	1.496			

Table – 5. ANCOVA of BAT scores for average achiever students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1938.594[a]	2	969.297	63.971	.000
Intercept	591.177	1	591.177	39.016	.000
Pre_Total	468.633	1	468.633	30.928	.000
Group	1223.810	1	1223.810	80.768	.000
Error	393.957	26	15.152		
Total	104465.000	29			
Corrected Total	2332.552	28			

a. R Squared = .831 (Adjusted R Squared = .818)

Table – 6. Estimated marginal means of average achiever students

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	66.134[a]	1.046	63.985	68.283
Control	53.008[a]	1.010	50.933	55.084

a. Covariates appearing in the model are evaluated at the following values: Pre Total Score Test = 21.55.

Again the BAT scores of average achievers were analysed by ANCOVA as shown in above tables (5 and 6). The table 5 indicated that F ratio at df 28 is $F_{(1, 28)} = 80.768$ and p=0.000 is significant at 0.0001 level. It substantiated our previous results that informal CLS significantly enhances the achievement in average achiever students. Estimated marginal means of the experimental group (66.13) is higher than control group (53.00) as given in the table – 6.

Independent sample t test for pre and post test of high achiever students

Pre test analysis of the high achiever student in both experimental and control group showed no significant differences in any of the variable and also in total BAT score. It clearly shows that the BAT score at pre level was matched in both the group as the values were not significant.

The post test analysis of high achiever student showed a significant increased in knowledge level (8.8%, $p<0.05$), understanding level (29.44%, $p<0.001$), applying level (27.86%, $p<0.01$) and total score (20.12%, $p<0.01$) as compared to control group.

Table – 7. Independent sample t test for pre and post test of high achiever students

Tests	Variables	Group	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pre test	Knowledge	Experimental	8	12.63	.744	.263	.505	14	.622
		Control	8	12.38	1.188	.420			
	Understanding	Experimental	8	9.50	1.512	.535	.000	14	1.000
		Control	8	9.50	2.070	.732			
	Applying	Experimental	8	5.75	.886	.313	1.426	14	.176
		Control	8	5.00	1.195	.423			
	Total Score	Experimental	8	27.88	2.475	.875	.678	14	.509
		Control	8	26.88	3.357	1.187			
Post test	Knowledge	Experimental	8	30.88	1.642	.581	2.224	14	.043
		Control	8	28.38	2.722	.962			
	Understanding	Experimental	8	28.00	2.268	.802	4.219	14	.001
		Control	8	21.63	3.623	1.281			
	Applying	Experimental	8	19.50	1.604	.567	3.157	14	.007
		Control	8	15.25	3.454	1.221			
	Total score	Experimental	8	78.38	4.470	1.580	3.730	14	.002
		Control	8	65.25	8.892	3.144			

Table – 8. ANCOVA of BAT scores for high achiever students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1152.846[a]	2	576.423	32.638	.000
Intercept	54.354	1	54.354	3.078	.103
Pre_Total	463.783	1	463.783	26.260	.000
Group	483.482	1	483.482	27.376	.000
Error	229.592	13	17.661		
Total	83895.000	16			
Corrected Total	1382.438	15			

a. R Squared = .834 (Adjusted R Squared = .808)

Table – 9. Estimated marginal means of high achiever students

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	77.399[a]	1.498	74.163	80.635
Control	66.226[a]	1.498	62.990	69.462

a. Covariates appearing in the model are evaluated at the following values: Pre Total Score Test = 27.38.

The ANCOVA analysis of higher achiever students shows that F ratio at df 15 is $F_{(1, 17)} = 27.376$ and p=0.000 is significant at .0001 level. It validates our results of t- test analysis which also revealed that informal CLS significantly enhances the achievement in high achiever students. Estimated marginal means of the experimental group (77.39) is higher than control group (66.22) as given in the table – 9.

DISCUSSION

The traditional teaching methods used in most of the school promote competitive learning among students where, students always struggle hard for getting better position from others (Joshi, 2015). In competitive environment students always hangout in race with their classmates to achieve better grade and these competitive classrooms are dominated with anxiety and stress (Tanner et al., 2003). In this type of educational setup major job of the teachers is to transfer the bunches of knowledge from their head into the heads of students and prepare students to pass out the examination at any cost without realizing whether students understood the concept or just memorized the answers and they found very less opportunity to give individual attention. Consequently, the gap between poor performer and good performer deepens and subsequently poor students' (low achievers) losses the confidence and their self-esteem suffered a lot. They may undergo stress and depression in case of failure in examination or in some extreme situation commit suicide. It is the failure of school system which became failed to cater the individual need (Yaduvanshi, 2015). So, there is strong need to incorporate some alternative pedagogy which can prepare our students according to vision of NCF 2005 and equipped our teacher to design learning pathways for present century learner. Felder and Brent (2003) suggested that in contrast to traditional teaching approaches and competitive grading the cooperative learning promotes higher academic achievement, better high-level reasoning and critical thinking skills, deeper understanding of learned material, and less disruptive behaviour of students, lower levels of anxiety and stress, greater intrinsic motivation to learn and achieve, greater ability to view situations from others' perspectives, more positive and supportive relationships with peers, more positive attitudes toward subject areas, and higher self-esteem among the students. The present study revealed that informal CLS significantly improves the academic performance of diverse ability of learner including lower, average and higher achiever students at knowledge, understanding and applying level of cognitive domains. The responses of the students on opinionnaire revealed that they enjoyed their respective role and had lots of fun during group activities. After receiving the treatment of informal cooperative learning, about 75% students perceived that they enjoyed group activities, and group discussion seems helpful to solve tough questions. It had observed positive interaction developed among high and low achievers. More than 85% of the students opinnioned that these activities were helpful to them in making new friends and studying Biology in the group was very much interesting. Results of the present study can be explained in light of the findings of Kibirige and Lehong (2016) they show that performance and motivation of learners improve when cooperative learning is used in science classroom. As the researches findings of Kenneth and Young (1999), Singhanayok and Hooper (1998), Khan (2012) and Majoka et al., (2007) showed that CLS has significantly improve the performance of lower achiever students. Felder and Brent (2003) observed that Low achievers students are likely to give up while working individually in traditional classroom set up, but when they working cooperatively, they are keep going. He further suggested that students of traditional classroom may tend to delay completing assignments or skip them altogether, but in cooperative classroom they know that others team member are counting their contribution, therefore they are motivated to do the work within scheduled timing. When the students are working under cooperative learning environment than, they are working together on group activity, promote each other learning thus, learning process become interesting and enjoyable (Panitz, 1999). So, lower achievers also take interest in academic task and actively participate in learning activities which contributes towards their success. Therefore lower ability students get benefited lots with the use of cooperative learning activities results in significantly high achievement in post test scores of BAT. Similar trends of enhancement in the performance of students achievement is also observed in average and higher ability students. The study shows the academic achievement of students of average ability is significantly increases at knowledge understanding as well as on application level. These results are in quite agreement with the findings of Numprasert (2006) and Buchs (2015) in which they found that structured CLS significantly increase the achievement of average achievers in comparison to traditionally taught groups. Since, cooperative learning creates excellent opportunities for students to engage in problem solving activities with the help of their group member (Effandi and Iksan 2007).

The cooperative learning classroom creates ample opportunities to the students to work interactively with their peer group and all types of students get benefitted from constant coaching, encouragement and constructive feedback from their team members. Ainley, Kos and Nicholas (2008) found in their study that 92% of learners agreed that discussing questions with others aided conceptual understanding, 82% agreed that listening explanations from others' facilitated their learning, and more than 90% reported that they felt most engaged and a active during class was when they were working with their peers in small groups. Therefore this strategy can enhance achievement of students at higher order of cognitive domain. This study further revealed that Informal CLS results in increase in achievement of higher achiever at all three levels of BAT i.e, knowledge, understanding and applying levels of cognitive domain which shows continue trends with the findings of earlier researchers Singhanayok and Hooper (1998), Armstrong (1999), Khan (2012), Numprasert (2006) and Gemechu and Abebe (2017) they all suggested that CLS improves the academic performance of higher achievers. Students

of higher academic ability found that their learning became stronger and concept became clearer during cooperative learning activities. When they explain and clarifying content to others often finds gaps in their own understanding, resolved their misconceptions and fill knowledge gaps side by side. But this results are contrast with the research findings of Kenneth and Young (1999), Majoka et al., (2007) and Buchs et al., (2015). A cooperative method of teaching engages learners twice effectively as compare to traditional method of teaching (Hake, 1998). This engagement may ultimately contribute towards high performance of students in cooperative classroom relatively to traditional classroom (MacManaway, 1970). Our findings suggest that informal CLS is one of important pedagogy in recent educational scenario which creates many of opportunities students centred learning in traditional classroom and ensure active involvement from all diverse ability of learner and hence, improve their achievement.

CONCLUSION

The implementation of informal CLS in Biology class has positive effect on diverse ability students of lower, higher and on average achievers. It significantly enhances the Biology achievement of all kinds of learner to that of their traditionally taught counterpart. Amalgamation of informal classroom with the traditional teaching learning processes creates many opportunities for active learning of the students. The classroom atmosphere is shifted from competitive to cooperative environment where, students of diverse ability help and motivate each-other to learn. Thus, classroom is full of empathy, cooperation and harmony that reduce occurrence of unpleasant situation and maximizes the achievement of all diverse ability learners.

REFERENCES

Abrami, P. C., Poulsen, C., & Chambers, B. (2004). Teacher motivation to implement an educational innovation: Factors differentiating users and non-users of cooperative learning. Educational Psychology, 24(2), 201-216.

Achor, E.E., Wude, M.H. and Duguryil, Z.P. (2013). Do Cooperative Learning Strategies have the Potentials to Eliminate Gender Difference in Students' Achievement in Biology? The Effect of STAD and Jigsaw Cooperative Strategies. Journal of Science, Technology, Mathematics and Education (JOSTMED), 10(1), 136-146.

Ainley, J., Kos, J. & Nicholas, M. (2008). Participation in science, mathematics and technology in Australian education, ACER research monograph no.63, Australian Council for Educational Research, Melbourne.

Al-Badawi GH. The Effect of Jigsaw versus Whole Class Instruction on EFL Students' Reading Motivation and Achievement. Department of Education of the Faculty of Arts and Sciences, American University of Beirut, 2005.

Armstrong, M.N. (1999). Gifted students and cooperative learning: A study of grouping strategies. Roe per Review, 21(4): 315-316.

Bowen, C.W. (2000). A quantitative literature review of cooperative learning effects on high school and college chemistry achievement. Journal of Chemical Education, 77, (1), 116-119.

Buchs, C., Wiederkehr, V., Filippou, D., Sommet, N., Darnon, C. (2015). Structured Cooperative Learning as a Means for Improving Average Achievers' Mathematical Learning in Fractions, Teaching Innovations, 28, (3), 15–35.

Effandi, Z. and Iksan, Z. (2007). Promoting Cooperative Learning in Science and Mathematics Education: A Malaysian Perspective. Eurasia Journal of Mathematics, Science & Technology Education, 3(1), 35-39.

Felder, R. M., and Brent, R. (2003). Learning by doing. Chemical Engineering Education, 37(4), 282–283.

Gemechu, D., Abebe, L. (2017). The Effect of Cooperative Learning on Academic Achievement of Grade Nine Students in Mathematics: The Case of Mettu Secondary and Preparatory School. World Academy of Science, Engineering and Technology, International Journal of Educational and Pedagogical Sciences, 11, (3), 720-726.

Gubbad, A.A.M.A. (2010) The Effect of Cooperative Learning on the Academic Achievement and Retention of the Mathematics Concepts at the Primary School in Holy Makkah . J. King Saud Univ., Vol. 22, Edu. Sci. & Islamic Studies (2), 13-23.

Hake, R. R. (1998). Interactive-engagement versus traditional methods: a six-thousand learner survey of mechanics test data for introductory physics courses. American Journal of Physics, 66(1):64-74.

Iqbal, M. (2004). Effective of cooperative learning on academic achievement of secondary school students in Mathematics. (Doctoral dissertation) Retrieved from http://eprints.hec.gov.pk/cgi/search/advanced.

Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. Educational Researcher, 38(5), 365-379.

Johnson, D. W., Johnson, R. T., Roseth, C., & Shin, T. S. (2014). The relationship between motivation and achievement in interdependent situations. Journal of Applied Social Psychology, 44(9), 622-633.

Johnson, D.W., Johnson, R.T. (1999). Making cooperative learning work. Theory into Practice. 38(2):67-73. Retrieved from http://www.jstor.org/stable/1477225

Johnson, D.W., Johnson, R.T., Smith, K.A. (1998). Active Learning: Cooperation in the College Classroom, (2nd ed.); Interaction Book: Edina, MN.

Joshi SK, Bhatnagar S. (2015). Effect of cooperative learning oriented teaching on the academic achievement of secondary level students. An International Peer reviewed and Refereed Scholarly Research Journal for Interdisciplinary Studies., III/XVII, 3015-3023.

Kagan S. Cooperative learning. San Juan Capistrano: Kagan Cooperative Learning, 1994.

Kenneth, D.J. and Young, A.M. (1999) Is cooperative learning effective for high achieving entrance students? Implications for policy and teaching Resources. Journal of Research and Development in Education, 33, 27-35.

Khan. S.A (2012). The effect of cooperative learning on academic achievement of low achievers in English language in India. pp. 235-243

Kibirige, I., and Lehong, M.J. (2016). The Effect of Cooperative Learning on Grade 12 Learners' Performance in Projectile Motions, South Africa. Eurasia Journal of Mathematics, Science & Technology Education, 12(9), 2543-2556

Kosar, R. (2003). An experimental study on effects of cooperative learning on social studies achievement among 7th class students. Unpublished M.A dissertation. PAF College of Education for Women, Rawalpindi.

Liao HC. Effect of Cooperative learning on Motivation, learning strategy utilization and Grammer Achevement of English language learner in Tiawan. Ph.D. Edu, University Of Orlean, 2005.

MacManaway, L. A. (1970). Teaching methods in higher education—innovation and research. Universities Quart. 24(3):321-329.

Majoka, M. I., Saeed., M., Mahmood., T. (2007). Effect of Cooperative Learning on Academic Achievement and Retention of Secondary Grader Mathematics Students, Journal of Educational Research, 10 (1) 44 - 56.

Miller, R. H. (1992). A lesson in action research: Cooperative learning and achievement. Schools in the Middle, 2(1), 11-13.

Muhammad, Z. (2010). Effects of cooperative learning intervention on mathematics achievement outcomes and attitudes of non-science college majors . Southern University and Agricultural and Mechanical College. Ph.D. Edu.

Muraya DN, and Kimamo G. Effects of cooperative learning approach on Biology mean achievement scores of secondary school students' in Machakos District, Kenya. Educational Research and Reviews. 2011; 6(12), 726-745.

National Curriculum Framework (NCF). (2005). Position Paper National Focus Group on Teaching of Science.National Council of Educational Research and Training (NCERT), New Delhi, India.

Nayak, R. K. (2011). Effect of Cooperative learning strategy onstudents' achievement in mathematics at Elementry level. Journal of Teacher Education & Research. Vol.6, No.1

Nnorom, N.R. (2015). Effect of Cooperative Learning Instructional Strategy on Senior Secondary School Students Achievement in Biology in Anambra State, Nigeria. International Journal for Cross-Disciplinary Subjects in Education (IJCDSE), Special Issue 5 (1), 2424-2427.

Numprasert., W. (2006). Cooperative Learning and the Achievement of Students in Science, Man, and His Environment, AU J.T. 9(3): 139-146.

Pandey, N.N. and Kishore, K. (2003). Effect of Cooperative learning on Cognitive Achievement in science. *Journal of Science and Mathematics Education in S.E. Asia*, 26, (2), 53-60.

Panitz, T. (1999), The Motivational Benefits of Cooperative Learning. New Directions for Teaching and Learning, 1999: 59–67. doi:10.1002/tl.7806

Singhanayok, C., Hooper S., The effects of cooperative learning and learner control on students' achievement, option selections, and attitudes. Educational Technology Research and Development, 1998, 46, (2), 17–36.

Siti Rahayah Ariffin. (1998). Pengajaran dan pembelajaran kpperatif sains: Satu pendekatan berkesan bagi Sekolah Bestari. Prosiding Seminar Kebangsaan Isu-Isu Pendidikan Negara, hlm 167-180.

Slavin Robert E. (1991). Synthesis of Research on Cooperative Learning. Educational Leadership, 48: 71-82. EJ 421.

Slavin, R. E. (2014). Cooperative learning and academic achievement: why does groupwork work? Anales de Psicologia, 30(3), 785-791.

Sridevi, K. V. (2008). Constructivism in Science Education; Discovery Publishing House, Pvt. Ltd. New Delhi.

Tanner, K., Chatman, L.S., and Allen, D. (2003). Approches to cell biology teaching: Cooperative learning in the science classroom-Beyond students working in groups. A Journal of Life Science Education, Spring 2, p.p. 1-15.

Yaduvanshi, S. (2015). Cooperative learning strategy in Indian classroom: reason and Relevance. Pillai Journal of Educational Research and Technology, 4, (4). 11-16.

Yaduvanshi, S., Singh, S. (2015). Cooperative Learning: An innovative pedagogy for achieving educational excellence. International journal of Applied Research. 1(11), 274-279.

Yager, S. O. (1985). The effects of structure oral discussion during a set of cooperative learning lessons on student achievement and attitude. Dissertation Abstracts International, 46(6), 1588-A.

EFFECTIVENESS OF LEARNING METHOD CONTEXTUAL TEACHING LEARNING (CTL) FOR INCREASING LEARNING OUTCOMES OF ENTREPRENEURSHIP EDUCATION

Chrisant Florence Lotulung
chrisantflorence@yahoo.com
Nurdin Ibrahim
Hetty Tumurang

ABSTRACT
Entrepreneur is a process or a way to conduct a business that aims to obtain the expected results or profits by producing, selling or renting a product of goods or services. In college, entrepreneurship courses are given to equip the students so that after they graduate they can entrepreneurship. Entrepreneurship courses are still not effective because the learning process that took place is not optimal. This is because the method of learning used by lecturers is just a lecture. One of the learning models that can be used to achieve these three competencies is the Contextual Teaching Learning model. If someone has done the act of learning it will be seen a change in one or several aspects of the behavior. What is meant is the result of entrepreneurship learning is a manifestation of the ability achieved, controlled or owned by the individual in this case the student after receiving an entrepreneurial learning experience and the results can be knowledge, understanding and application of concepts, calculation of problem solving based on the subject.

INTRODUCTION

Entrepreneur is a process or a way to conduct a business that aims to obtain the expected results or profits by producing, selling or renting a product of goods or services. While entrepreneurship is the creative and innovative ability that is used as the basis, tips, and resources to find opportunities for success. Something new and different is the added value of goods and services that become a source of excellence to be an opportunity. In Indonesia, entrepreneurship is only limited to certain schools or colleges. In line with developments and challenges such as economic crises, entrepreneurial understanding through both formal education and training in all walks of entrepreneurial society is evolving.

In college, entrepreneurship courses are given to equip the students so that after they graduate they can entrepreneurship. Entrepreneurship courses are still not effective because the learning process that took place is not optimal. This is because the method of learning used by lecturers is just a lecture. Learning is defined as the process of student interaction with lecturers, and learning resources, in a learning environment. Learning is a process of behavioral change from the results of an activity that is done repeatedly. In learning, students learn the material provided. Education is closely related to learning. If learning is modeled as a process, then education is an effort to achieve the process. Learning is not limited to the intellectual or cognitive aspect alone, but is the process of attitude formation or affective and behavioral or psychomotor, thus impacting the development of self, which is useful for self, society, nation and State. One of the learning models that can be used to achieve these three competencies is the Contextual Teaching Learning model. CTL is a holistic learning process that aims to educate learners in comprehending learning materials meaningfully related to real life context, whether related to personal, religious, social, economic, and cultural environment. So that learners acquire knowledge and skills that can be applied and transferred from one context to one problem to another.

A. Enterpreneurship in College

The notion of the entrepreneur is often equated with entrepreneurship, as is the use of the term self-employment with entrepreneurs. Entrepreneurship is a key driver of our economy. Wealth and a majority of jobs are created by small businesses started by entrepreneurially minded individuals, many of whom go on to create large enterprises (Celuch, 2017). The terms Entrepreneurs and entrepreneurs are basically the same, although the formulation is different but the content and characteristics are the same. Entrepreneurs focus more on the object, there is an independent business while the entrepreneur is more emphasis on the soul, the spirit is then applied in all aspects of life. Entrepreneurship is a dynamic process of creating added value for goods and services and prosperity. The entrepreneur is an innovator who implements changes in the market through new combinations. The new combinations can be in the form of: (1) introducing new products, (2) introducing new production methods, (3) opening new markets, (4) obtaining new supply sources of new materials or components; and (5) running a new organization in an industry. Still according to Schumpeter, entrepreneurship does not necessarily mean a view or a manager but a unique person who has the courage to take risks and introduce innovative products and new technologies into the economy and few entrepreneurs can feel the potential for new discoveries and then make use of them.

Entrepreneurship and enterprise skills are crucial to the future of world economies, especially as an agency to innovate and support the wealth creation process (Zheng & Callghan, 2016). So entrepreneurship is a process of creating something different by devoting all of its time and energy to be accompanied by financial, psychological, social, and receiving financial rewards in the form of money and personal satisfaction. In entrepreneurship the ability to create something new and different through creative thinking and innovative action to create opportunities in facing life's challenges. In essence entrepreneurship is the nature, characteristics, and character of someone who has the will to realize innovative ideas into the real world creatively. The application of creativity and innovation to solve problems and efforts to take advantage of the opportunities faced every day and is a combination of creativity, innovation and risk-taking courage, is done with hard work to form and nurture new ventures (Zimmerer, 1996). On the other hand, Identifying the factors influencing entrepreneurship is a key issue for policy makers in order to design effective self-employment policies and entrepreneurship initiatives. However, fear of failure and unwillingness to take risks were seen as the major obstacles facing university students in embarking on an entrepreneurial path (Ibrahim, et all. 2017).

From some of these statements it can be concluded that entrepreneurship is a process of creation by adding the value of something achieved through hard effort and timing with estimates of supporting, physical, social risk, and will receive rewards in the form of financial and personal satisfaction and independence. Entrepreneurship is not always synonymous with the behavior and character of the entrepreneur, because this nature is also owned by those who are not entrepreneurial entrepreneurs cover all aspects of the work. Entrepreneurs are those who make creative and innovative efforts by developing ideas and gathering resources to find opportunities. Entrepreneur is someone who organizes, operates and calculates risk for a profit-making business. There are seven essential elements of entrepreneurship, namely:

1. Entrepreneurship is the value embodied in a behavior that is used as a resource, driving force, goals, tactics, tips, processes and business results
2. Entrepreneurship is the ability to create something new and different.
3. Entrepreneurship is the process of applying creativity and innovation in solving problems and finding opportunities to improve life or business
4. Entrepreneurship is the value needed to start and grow a business
5. Entrepreneurship is the process of doing something new and useful and worth more
6. Entrepreneurship is an effort to create added value by combining resources through new and different ways to win the competition. The added value can be created by developing technology and science, producing goods and services more efficiently, improving existing products and services, and finding ways to provide satisfaction to consumers.

Enterpreneurs need leadership skills, while training and development of them and their employees around effective participation in decision making, communication of vision and goals and support for personal initiative is critical. The connection between experience, learning and enterpreneurial effectiveness has implications for the development of individuals and possibly teams of enterpreneurs (Barrett and Mayson, 2008).

Entrepreneurship is the dynamic process of creating additional wealth. Wealth is created by individuals who dare to take risks on terms of fairness, time or career commitment or the provision of value for various goods and services. The products and services may not be new or unique, but they must be highlighted by utilizing skills and resources. Entrepreneurship is a key competency to be developed from an early age. As attitudes and cultural references take shape at an early age, education can play an important part in successfully addressing entrepreneurial challenges. Therefore education should develop awareness of intrepreneurship from an early age. Introduce young people to develop entrepreneurial spirit and help them to be more creative and confident in whatever they do and act in socially responsible ways. Adaptive learning permits an organization to maintain its currently policies and act consistently with them; generative learning involves examination of an organization's assumption and modification of the underlying norms, policies and objectives (Li, 2016). A wide provision of entrepreneurial courses requires a full consideration of the intrinsic learners' needs, the perceived' targets' and goals of educational agencies, the promoted theoretical background of the relevant courses, appropriate teaching models and other aspects in order to attain impact on trainees (Kakouris & Georgiadis, 2016).

The school curriculum should be revised to explicitly include entrepreneurship as an educational objective. Schools should also be provided with practical support and incentives to enter entrepreneurship in their curriculum through different instruments. Entrepreneurship educators must practice what they preach in the effort to drive change and improve educational outcomes (McGuigan, 2016). A corporate entrepreneurship perspective is used to construct a framework for understanding academic entrepreneurship at different ontological levels within a university context (Brennan & McGowan, 2006). While in college, entrepreneurship should be included in a variety of subjects, especially in scientific and technical studies, in order to provide

students with specialized training on how to start and run a business. Support for teachers is also important, that teachers will be given initial training as well as practical experience. Awareness must also be enhanced between the principal to run, and evaluate the activities. Educational institutions and local communities, especially businesses must work together on the subject of entrepreneurship, and companies should regard this as a long-term investment and as an aspect of their social responsibility.

It is necessary to bring vocational education in line with the state's requirements in terms of its content and quality, which is connected with the development of mechanisms for forecasting the needs of the economy and the social sphere in specialists and workers, identification of trends in the development of the system with respect to the list of professions and specialties, as well as modernization of the content of education (Markova, et all. 2017). The most essential is to enhance the educational level of individuals with disabilities in order to actively involve them into work and enhance their competitiveness in the labour market (Movkebayeva. Et all. 2017). One of the most effective ways of promoting entrepreneurial thinking and skills is through learning by doing (students make and run mini companies). This can trigger students to create their own company after their study. Community programs, economic development initiatives, universities, community colleges and private industry are offering a variety of entrepreneurship educational training courses to address employment issues and build local economies. Entrepreneurship training and education is delivered in many shapes and sizes as well as delivered by many entities both private and public (Kerrick, et all. 2016).

Exposing college students to entrepreneurship, if only through an awareness of entrepreneurship around them, are an important building block to their careers and society as a whole. As such, college is arguably a viable place to plant the seed of entrepreneurial intentions and to see if any have taken root (Claire, 2016). In other words, since students learn about entrepreneurship and themselves, entrepreneurship education leads to more variance in entrepreneurial intentions (higher and lower scores) (Ewijk & Al Aomar, 2016). While designing the education program for entrepreneurs, the following points should be kept in mind- Student specific requirements should be understood; the teaching should be more specific to student requirements; didactic methods such as lectures, readings, text books and seminar should be used for providing new information; active case studies, group discussions, brainstorming etc. should be used for skills building; problem solving in real-world situation, consultancy with small firms should be taken to provide hands-on experience (Mani, 2015).

The predominant indicators of the entrepreneurial university over the last three decades have been based on more easily avalilable quantitative indicators which capture the way in which universities push or sell what they already do; the incentives they create, the ways in which they organize themselves, and the outputs they produce in the form of patents, licenses, and spin-outs (Walshok & Shapiro, 2014). Key elements of the university ecosystem facilitating entrepreneurship include: (1) the rise of property-based institutions, such as incubators/accelerators and science/technology/research parks, to support technology transfer and entrepreneurship (2) substantial growth in the number of entrepreneurship courses and programs on campus (in multiple colleges/schools), (3) the establishment and growth of entrepreneurship centres, (4) a rise in the number of “surrogate” entrepreneurs on campus to stimulate commercialization and start-up creation, and (5) a rapid increase in alumni support of various aspects of this entrepreneurial ecosystem, including alumni commercialization funds and student business plan competitions (Siegel & Wright, 2015).

In line with this global discourse, university teachers are encouraged to be ‘entrepreneurial’, told that research can and should be commercialized, that patenting is important, that it is a good thing to start businesses, but also to develop entrepreneurial approaches to teaching and to cooperation with society and organizations outside of academia (Faltholm, et all. 2010). Regarding acedemy, entrepreneurship as an important educational innovation and discipline toward growing demand from seasoned business people interested in attaining skills to help them further expand their business. Considering public policy, education is one the most important factors influencing the entrepreneurial sector (Szopa, et.all. 2015). However, in addition to entrepreneurship, students also need to be equipped with marketing skills. The first step to do in equipping students about entrepreneurship include:

1. Students are taught to know their own weaknesses and strengths. Previously they were invited to get to know each other and tell each business interest.
2. Students are invited to further explore the ins and outs of business planning. Students should be divided into groups and asked to explain their business ideas. Then the business idea is analyzed by using SWOT analysis.
3. Students are trained to calculate the budget of the business idea submitted in the previous day. At the end of the future is expected to emerge creative entrepreneurs and independent
4. Students are trained to plan and conduct a simple market assessment to find out customer needs and wants. Also to know the advantages and weaknesses of competitors. It is important to know if later plunge in

marketing efforts to perform marketing strategies in improving the quality of service to customers. One goal is to let students know the 4P marketing plan, ie product, price, place and promotion.

B. Contextual Teaching Learning Method

According to Sanjaya Contextual Teaching and Learning (CTL) is a learning strategy that emphasizes the full process of student involvement in order to find the material learned and relate it to real life situations that encourage students to apply it in their lives. CTL is a grassroots initiative that has emerged from teachers' efforts to build upon situated-cognition research and integrate into one approach a number of validated strategies that are too often employed independently of one another (Glynn, 2004). Contextual learning is a learning concept whereby teachers present real-world situations into the classroom and encourage students to make connections between their knowledge and application in their lives as family and community members. The meaning and knowledge carried by an individual are therefore, outcome of one's own experiences. Without experiences the individual is empty (Sylker & Kiyoshi, 2014).

Learning outcomes are expected to be more meaningful for children to solve problems, critical thinking and conducting observations and drawing conclusions in their long-term lives. In that context, students need to understand what learning means, what are the benefits, in what status they are and how to achieve them. CTL motivates learners to take charge of their own learning and to make connection between knowledge and its applications to the various contexts of their lives : as family members, as citizen, and as workers (Sears, 2003). Contextual is just a learning strategy. As with other learning strategies, the contextual is developed with the aim that learning goes more productive and meaningful. The contextual approach can be run without having to change the curriculum and the existing order by involving the seven main components of effective learning: Constructivism, Questioning, Inquiri, Learning Community, Modeling, and Authentic Assessment.

CTL learning strategy is an educational process that aims to help students see meaning in the academic material they learn by connecting academic subjects with the contents of daily life, that is with the context of personal, social and cultural life. Contextual learning as a model of learning that provides facilities for student learning activities to find, process and find learning experiences that are more concrete (related to real life) through the involvement of student activities in trying, doing and experiencing themselves. Incorporating the principals of contextual teaching helps to promote authentic learning and increases students' success by allowing them to make connections as they construct knowledge (Hudson & Whisler, 2001). Contextual teaching and learning represents a concept that involves connecting the content, the student's learning, with the context in which the content will be used (Putnam & Leach, 2005).

Learning is not only seen from the product side, but the most important is the process. This concept of learning can help teachers in relating between the material taught to the students' real-world situations and encouraging students to make connections between the knowledge they possess and their daily lives in which they live. To reinforce an applicative learning experience for students, learning needs to provide opportunities for students to do, try and experience themselves and not just as passive listeners who only receive all the information conveyed by the teacher. Students who acquire CTL learning will find it easier to understand events or activities after receiving information from teachers. In addition, students will be able to solve the problems that exist in his life. Five elements that must be considered in contextual learning is learning must pay attention to knowledge, learning starts from the whole, learning must be emphasized on understanding, learning is emphasized on effort practice, reflection on learning strategy and development.

CTL is a learning concept that helps teachers connect between the material taught to the real-world situations of learners and encourages learners to make connections between their knowledge and application in their daily lives, involving the seven main components of learning the main effective learning, that is Construktivism, Questioning, Inquiry, Learning Community, Modeling and Authentic Assessment. CTL strategy is an educational process that aims to help students see meaning in the academic material they learn by connecting academic subjects in the context of their daily lives, with the context of their personal, social and cultural circumstances. To achieve this goal, the system includes the following eight components: making meaningful connections, doing meaningful work, doing self-regulated learning, collaborating, critical and creative thinking, helping individuals to grow and develop, attaining high standards, and using authentic scoring. There are seven strategies in carrying out in implementing CTL learning, that is:

a. Problem-based Teaching. The educator raises the problem of the learner challenged to think critically in solving the problem. This problem will bring personal and social meaning to the students.
b. Using diverse contexts. Educators make various contexts (school, family, community and so on) so that meaning (knowledge) is more qualified.

c. Consider student diversity. Educators nurture individuals and believe that individual and social differences should be used as a driving force for mutual respect and tolerance for the realization of interperonal skills.
d. Empowering students to learn on their own. Every human being is a lifelong active learner. Formal education is a crater candradimuka for learners to master the way of learning in order to learn independently in the future. For that they must be trained to think critically and creatively in searching and analyzing information with a little help or in an independent way.
e. Learning through collaboration. Learners get accustomed to learn from each other and from groups to share knowledge and determine the focus of learning.
f. Use authentic scoring. Authentic assessment shows that learning has taken place in an integrated and contextual manner, and provides an opportunity for learners to move forward in accordance with their potential.
g. Pursuing high standards. Schools determine graduation competencies from time to time are continuously improved.

The purpose of contextual learning is to equip students in the form of knowledge and skills are more relistis because the core of this learning is to bring things theoretical to practical. So that in the implementation of this method is cultivated theory that is learned applied in real situation. For lecturers this method helps lecturers to connect the material taught to the real world and encourage students to make connections between prior knowledge and its application in their life in society. In this context learners understand what learning means, what the benefits are in what status they are in, and how to achieve them. They realize that what they learn is useful for their later life. Thus they position themselves as needing a provision for their future life. They learn what is beneficial to him and strive to achieve it. In that effort, they need teachers as directors and mentors. CTL is much influenced by the constructivism philosophy developed by Jean Piaget. Piaget argues that since childhood the child already has a cognitive structure called a scheme formed by experience. In a contextual classroom, the teacher's job is to guide learners to achieve their goals. Teachers deal more with methods than to inform. Contextual only as a method of learning. As with other learning methods, contextual is developed with the aim that learning goes more productive and meaningful. Contextual approach can be implemented without having to change the curriculum and the existing order. CTL as a learning strategy has 7 principles. These principles underlie the implementation of the learning process by using CTL which should be developed by lecturers, that is :

1. Constructivism. Constructivism is the cornerstone of thought (philosophy) in CTL, namely that knowledge is built by humans little by little that the results are expanded through a limited context. Knowledge is not a set of facts, concepts or rules that are ready to be taken and remembered. Man must build that knowledge through meaningful experience. The above constructivism limits emphasize that the concept is not unimportant as an integral part of the learning experience that students should have, but how each of the concepts or knowledge that students have can provide real guidance for students to be actualized in real conditions. Therefore, in CTL, a strategy to connect students between each concept and reality is the preferred element compared with the emphasis on how much knowledge should be remembered by the students. The results of the study found that the fulfillment of theoretical satisfaction ability had a positive impact on the short term, but do not make a good enough contribution in the long run. The hapless theoretical knowledge is easily separated from one's memories if not supplemented by real experience. The implications for lecturers in developing this constructivism stage are mainly demanded the ability to membingbing students get the meaning of each concept he learned. Learning will be felt to have meaning if directly or indirectly related to the daily experience experienced by the students themselves. Therefore, each lecturer must have a sufficiently broad knowledge, so that with his insights he always easily provide illustrations, using learning resources, and learning media that can stimulate students to actively seek and do as well as find themselves the link between the concepts learned with experience. In this way, the student learning experience will facilitate the student's ability to transform other problem-solving problems, even in different spaces and times.
2. Inquiry. Discovering, is a core activity of CTL, through discovering efforts will provide assertion that the necessary knowledge and skills and other abilities are not the result of remembering a set of facts, but are the result of finding out for themselves. Learning styles that lead to discovery, have long been introduced in the study of inquiry and discovery. Of course the finding element of both learning (CTL and inquiry and discovery) in principle is not much difference, essentially the same, that is the model or learning system that helps students both individually and in groups learn to find themselves according to their respective experience. emotional satisfaction, something results finds itself a higher value of satisfaction than the results of giving. Moving from that simple logic seems to have a close relationship when associated with a learning approach. Where learning outcomes are the outcomes and student credentials themselves, will be more durable remembered by the students when compared with the fullest of the lecturers. To grow the students' habits creatively in order to find their own learning experience, it implies the strategy developed by lecturers.

3. Questioning. Another element that is the main characteristic of CTL is the ability and habit to ask. Therefore, asking is a key strategy in CTL. The application of unsure elements in CTL should be facilitated by lecturers, students' habits to inquire or the ability of lecturers to use good questions will lead to improved quality and productivity of learning. As in the previous stages, the development of the ability and the desire to ask, is strongly influenced by the learning atmosphere developed by lecturers. In the implementation of CTL, questions raised by lecturers or students should be used as a tool or approach to explore information or learning resources that are related to real life. In other words, the task for the lecturer is to guide the student through the questions asked to look for and find the link between concepts learned in terms of real life. Through the application of questions, learning will be more lively, will encourage the process and results of learning more extensive and deep, and will be found many related elements that previously not thought either by lecturers or by students. Therefore, it is reasonable to ask the development of learning productivity will be higher because by asking, then; 1) Can explore information, both administration and academic; 2) Check students' understanding; 3) Generating student responses; 4) Knowing the extent of student curiosity; 5) Knowing what the students know; 6) Focusing students' attention; 7) Generating more questions from students; and 8) Refreshing the knowledge that students already have.
4. Learning Community. The purpose of the learning community is to familiarize students to work together and utilize learning resources from their friends. As suggested in the learning community, the learning outcomes are derived from cooperation with others through various experiences. Through this sharing children are accustomed to give each other and receive, the nature of positive dependence in learning community developed. Humans are created as individual beings as well as social beings. This implies that there are times when a person works alone to achieve the expected goals, but on the other hand can not escape dependence with other parties. Implementation of learning community in classroom learning will depend much on the model of learning communication developed by lecturers. Where required skills and professionalism of lecturers to develop the communication of many directions (interaction), ie communication model that is not only the relationship between lecturers with students or vice versa, but widely opened the path of communication communication between students and other students. learning in CTL is highly possible and widely open utilizing other learning communities outside the classroom. Each student should be guided and directed to develop his curiosity through the widespread use of learning resources that are not only partitioned by the learning community in the classroom, but other human resources outside the classroom (family and community). When we and students are accustomed to provide a broad experience to others, then at that time we or the students will gain more experience from other communities
5. Modeling. The development of science and technology, the complexity of life problems encountered and the growing demands of students and diverse, has impacted the ability of lecturers who have complete ability, and this is difficult to meet. Therefore, now lecturers are no longer the only source of learning for students, because with all the advantages and limitations possessed by lecturers will experience barriers to provide services in accordance with the wishes and needs of students who are quite heterogeneous. Therefore, the modeling stage can be used as an alternative to develop the learning so that students can meet the students' expectations thoroughly, and help overcome the limitations possessed by the lecturers.
6. Reflection. Reflection is a way of thinking about what has just happened or just been learned. In other words, reflection is the backward thinking about what has been done in the past, the student precipitates what he or she just learned as a new knowledge structure that is an enrichment or revision of previous knowledge. At the time of reflection, students are given the opportunity to digest, weigh, compare, live, and conduct discussion with itself (learning to be). A meaningful knowledge is obtained from a meaningful process also, that is acceptance, processing and precipitation, made a sandar in response to later symptoms. through learning the CTL model, the learning experience is not just happening and belongs when a student is in the classroom, but far more important than that is how to bring the learning experience out of the class, that is when he is required to respond and solve real problems faced day-to- day. The ability to apply knowledge, attitudes, and skills to the real world it faces will be easily actualized when the learning experience has been internalized in each student's soul and this is where the importance of applying elements of reflection to every learning opportunity.
7. Authentic assessment. The last stage of contextual learning is to conduct an assessment. Assessment as an integral part of learning has a very decisive function to obtain information on process quality and learning outcomes through the application of CTL. Assessment is the process of collecting various data and information that can provide an overview or clue to the learning experience of students. With the accumulation of various complete information data as the embodiment of the appraisal, it will be more accurate also the lecturer's understanding of the process and the results of each student's learning experience. The lecturer will carefully know the progress, setbacks and difficulties of students in learning, and with it also the lecturer will has the ease to make efforts to improve and refine the process of tutoring in the next step. Given the picture of the student's learning progress required elaborate learning process, then the

assessment is not only done at the end of the learning program, but integrally done during the process of the learning program occurs. In this way, the lecturer will obviously know the actual level of student ability.

C. Learning Outcomes

Learning outcomes are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning (Kennedy, et all. 2005). Learning is one of the factors that influence and play an important role in the formation of personal and individual behavior. Most of the individual development takes place through learning activities. The importance and value of general education courses, including the requirements in the development of students learning according to essential learning outcomes, have been the reasons for implementation in several researches and development in general education courses for many years until the present time (Kleebbua & Siriparp, 2016). Rusman says that learning is an activity that can be done psychologically and physiologically. Activities that are psychological activities that are mental processes, such as activity thinking, expressing, understanding, concluding, listening, reviewing, comparing, differentiating, analyzing and so forth. While activities that are physiological activities that are the process of application or practice, such as conducting experiments or experiments, exercises, practice activities, create works, appreciation and more.

Learning according to Hamalik is a modification or reinforcing behavior through experience. According to this understanding, learning is a process, an activity and not a result or a goal. Learning is not just remembering, but more broadly than that, that is experiencing. Learning outcomes are not a mastery of training outcomes but behavior change. Learning according to Munir is a process of behavior change, due to individual interaction with the environment. So behavior change is the result of learning. That is, someone is said to have learned if he can do something that can not be done before. The behavior is doing aspects of knowledge cognitive), attitude (affective) and skills (psychomotor). Therefore, a good of learning outcomes requires onsiderable understanding of how to best relate the course content to our types of students and how to make the course meaningful to our student needs and life experiences (Aziz, et all. 2012).

A learning outcome is a description of what a student should know after fulfilling a given course. That is what the student should know, understand and be able to demonstrate on completing the course (Klefstad, 2010). Learning outcomes are important for recognition. Learning outcomes are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning (Kennedy, 2012). Learning outcomes are some of the results achieved by students after experiencing the learning process. Learning process activities in schools aimed to obtain good learning outcomes. The result of learning according to Rusmono is the change of individual behavior which includes three domains that differ from each other, but has a close relationship that is: 1). Learning outcomes are included in the cognitive domain, ie learning outcomes related to intellectual development and intellectual thinking skills; 2). Learning outcomes included in the affective domain, ie learning outcomes that reflect changes in interests, attitudes and values found in students; 3) learning outcomes that are included in the psychomotor domain, namely learning outcomes related to the skills of students in carrying out activities. The academic performances have been measured using the number of credits, got every year, using the tests given at a course, and the results of a progress test. The analyses of multiple regression showed that the analysed learning activities, performance obtained during the first and second year, the courses attended during high school time , conscientiousness and verbal inteligence have been strongly and steadily connected with the academic performance (Lile & Bran, 2014).

Learning outcomes can be used as a benchmark or reference to know the high level of a person's learning ability, which is intended in the form of behavior change in a person as a result of his experience. From some opinions above can be concluded that the results of learning is the ability of skills, attitudes and skills obtained by students after receiving treatment provided by the teacher so that it can construct knowledge in everyday life. While specific applications are selected from across the range of facilities that learning platforms provide by some students, there are also students who move across and between different affordances and applications to support and enhance their learning experiences and learning outcomes (Passey & Higgins, 2014). A positive consequence of focus on learning outcomes may also be that it naturally calls for an increased focus on the underlying pedagogical approach and the philosophy of learning (Nygaard, et all. 2009). Achieving learning outcomes need specific experiences to be provided to the students and evaluation of their attainment. Student assessment provides an indication of the areas where learning has happened and where it has to be improved upon (Aithal & Kumar, 2016).

These behavioral changes are obtained after students complete their learning program through interaction with various learning sources and learning environment. The learning outcomes measured in this study are emphasized in the cognitive domain especially about intellectual ability or cognitive ability. Learning outcomes

require certain competencies that a teacher must possess. One of these competencies is the ability to evaluate every learning process. Competence is run straight with the tasks and responsibilities in learning, including learning process and learning outcomes. Effective program and course design relies on the establishment of learning outcomes that guide curriculum development and assessment and facilitate student success (Norris, 2016). Learning outcomes reinforce the belief that there is a real point to what is being taught and assessed, that there is a reason for what they experience in their courses. Students are less likely to become cynical and dismissive of courses that seem to have a point, and more motivated to take them seriously (Potter & Kustra, 2012). Learning activities are a process, while learning outcomes are some of the results achieved by students after experiencing the learning process. Learning outcomes are obtained by firstly evaluating the learning process that has been done. The results of entrepreneurial learning is strongly influenced by the teaching and learning process undertaken.

Learning outcomes are some of the results achieved by students after experiencing the learning process. Student learning process activities aimed at obtaining good learning outcomes. Student learning outcomes can be observed through changes in behavior, attitudes and knowledge. A person can be said to have succeeded in learning if he is able to show a change in him. Such changes include in terms of ability to think, skill, or attitude toward an object. Although there may be a direct relationship between meaningfulness and learning, the uniqueness of reality and peoples' idiosyncratic tendencies makes this relationship complex and challenging to predict. This difficulty is especially evident when trying to capture or predict what students learn (Marsh, 2007).

Learning outcomes require certain competencies that a teacher must possess. One such competence is the ability to evaluate every learning process. The competence goes straight with the duties and responsibilities of teachers in learning including learning process and learning outcomes. Learning activities are a process, while learning outcomes are some of the results achieved by students after experiencing the learning process. Learning outcomes are obtained by firstly evaluating the learning process that has been done.

The result of learning according to Rusman is a number of experiences obtained by students that includes the realm of cognitive, affective and psychomotor domains. Learning is not only the mastery of the subject theory concepts, but also the mastery of habits, pleasures, interests-talents, social adjustments, skills, ideals, desires and expectations. This is in line with Hamalik's opinion that the results of learning can be seen from the change of perception and behavior, including the improvement of the behavior of the learners, for example from not knowing to know, from not understanding to understand. If someone has done the act of learning it will be seen a change in one or several aspects of the behavior. What is meant is the result of entrepreneurship learning is a manifestation of the ability achieved, controlled or owned by the individual in this case the student after receiving an entrepreneurial learning experience and the results can be knowledge, understanding and application of concepts, calculation of problem solving based on the subject.

D. Enhancement of Learning Quality Entrepreneurship Course using Contextual Teaching Learning Method

The CTL learning strategy invites students to think critically, so that students really feel that the entrepreneurial learning experience has a positive and useful impact on their lives, therefore learning outcomes will differ between the application of CTL and conventional learning strategies. The CTL learning strategy enables the creation of a conducive learning environment for students to learn to work actively in groups, giving more opportunities for students to be actively involved in the construction process of knowledge, skills, attitudes in groups, achievement awards for individuals and groups, and level of student ability more controlled. Learning by CTL method is based on cognitive theory because according to this theory interaction can support learning. Learning using conventional strategy emphasizes more on the development of learning ability to receive (reception learning).

The CTL learning strategy provides students with the motivation to understand the meaning of the subject matter with the context of their daily life in the context of their personal, social and cultural life. This social learning strategy allows students to have the knowledge / skills flexibly applicable from one problem to another. In contrast to conventional learning strategies that only receive direct lessons taught lecturers. CTL learning strategies have the characteristics of learning to cooperate with fellow students during the learning process. In contrast to conventional learning strategy, students only accept, record and memorize lessons given by lecturers so that no cooperation can foster a sense of togetherness among students. Based on the conceptual and entrepreneurial learning objectives as described above, students using CTL learning strategies can be expected to achieve higher entrepreneurship learning outcomes than students taught using conventional learning strategies.

Referrence

Aithal, P, S. Kumar, Suresh, P, M. 2016. Student Performance and Learning Outcomes in Higher Education Institutions. International Journal of Scientific Research and Modern Education (IJSRME) ISSN (Online): 2455 – 5630 (www.rdmodernresearch.com) Volume I, Issue I, 2016

Aziz, Azmahani A. Et all. 2012. Evaluation on the Effectiveness of Learning Outcomes from Students' Perspectives. International Conference on Teaching and Learning in Higher Education (ICTLHE 2012) in conjunction with RCEE & RHED 2012. Procedia - Social and Behavioral Sciences 56 (2012) 22 – 30

Barrett, Rowena. Mayson, Susan 2008. International Handbook of Enterpreneurship and HRM. Massachusetts : Edward Elgar Publishing Limited.

Celuch, Kevin. Et all. 2017. Enterpreneural Identity : The Missing Link for Enterpreneurship Education. Journal of Entrepreneurship Education (Print ISSN: 1098-8394; Online ISSN: 1528-2651). issue: 2 | Volume: 20 | Month: December

Chao-Hua Li, 2016. From Adaptive to Generate Learning in Small and Medium Enterprises-a Network Prespective. Journal of Global Enterpreneurship Research. DOI 10.1186/s40497-017-016-0054-y

Claire, Lynnette. Perryman, Alex A. 2016. Where's Waldo ? The Search for Enterpreneurial Role Models. Journal of Entrepreneurship Education (Print ISSN: 1098-8394; Online ISSN: 1528-2651). issue: 1 | Volume: 19 | Month: December

Ewijk, Anne Van. Al-Aomar, Raid. 2016. Inspiration, Self-Awareness and Enterpreneurial Intention : A Mixed-Method Case Study of Postgraduate Engineering Studyents in The UEA. Journal of Entrepreneurship Education (Print ISSN: 1098-8394; Online ISSN: 1528-2651). issue: 1 | Volume: 19 | Month: December

Falthoml, Yiva. Et all. 2010. Academic Entrepreneurship-Gendered Discourses and Ghettos. Journal of Technology Management & Innovation. 2010, Volume 5, Issue 1

Glynn, Shawn M. Winter, Linda K. 2004. Contextual Teaching and Learning of Science in Elementary Schools. Journal of Elementary Science Education, Vol. 16, No. 2 (Fall 2004), pp. 51-63.©2004 Department of Curriculum and Instruction, College of Education and Human Services, Western Illinois University

Hudson, Clemente Charles. Whisler, Vesta R. 2001. Contextual Teaching and Learning for Practitioners. Systemics, Cybernetics And Informatics. Volume 6 - Number 4. ISSN: 1690-4524.p.54-58

Ibrahim, Omer Ali, et all. 2017. Implication of Attitude of Graduate Students in Oman Towards Enterpreneurship : An Empirical Study. Journal of Global Enterpreneurship Research. DOI 10.1186/s40497-017-0066-2

Kennedy, Declan. Et all. 2005. Writting and Using Learning Outcomes : a Practical Guide. Ireland : University College Cork (UCC)

Kennedy, Declan. 2012. Learning Outcomes in Ireland-Implication for The Science Classroom. Chapter 5. Making it tangible. Learning outcomes in science education. Berlin, Waxman

Kerrick, Sharon A. Et all. 2016. Comparing Military Veterans and Civilations Responses to An Enterpreneurship to Education Program . Journal of Entrepreneurship Education (Print ISSN: 1098-8394; Online ISSN: 1528-2651). issue: 1 | Volume: 19 | Month: December

Kleebbua, Chaiyut. Siriparp, Thomrat. 2016. Effects of Education and Attitude on Essential Learning Outcomes. Procedia - Social and Behavioral Sciences 217 (2016) 941 – 949

Klefstad, Bjorn. Et all. 2010. Learning Outcomes and a Taxonomy as a Starting Point for creating digital Multiple-choice Tests. Seminar.net - International journal of media, technology and lifelong learning Vol. 6 – Issue 3 – 2010

Lile, Ramona & Bran, Camelia. 2014. The assessment of learning outcomes. Procedia - Social and Behavioral Sciences 163 (2014) 125 – 131

Mani, Mukta. 2015. Entrepreneurship Education : A Students' Perspective. International Journal of E-Entrepreneurship and Innovation, 5(1), 1-14, January-June 2015

Markova, Swetlana. Et all. 2017. Role of Education in Development of Professional Values of Specialists. Journal of Entrepreneurship Education (Print ISSN: 1098-8394; Online ISSN: 1528-2651). issue: 3 | Volume: 20 | Month: December

Marsh, Patricia A. 2007. What is Known about Student Learning Outcomes and How does it relate to the Scholarship of Teaching and Learning? International Journal for the Scholarship of Teaching and Learning. Volume 1 | Number 2. Article 22

McGuigan, Patrick J. 2016. Practicing What We Preach : Enterpreneurship in Enterpreneurship Education. Journal of Entrepreneurship Education (Print ISSN: 1098-8394; Online ISSN: 1528-2651). issue: 1 | Volume: 19 | Month: December

Michael C. Brennan, Pauric McGowan, (2006) "*Academic entrepreneurship*: an exploratory case study", *International Journal* of Entrepreneurial Behavior & Research , Vol. 12 Issue: 3, pp.144-164, https://doi.org/10.1108/13552550610667431

Movkebayeva, Zulfiya. Et all. 2017. Students Attitude towards Co-Education with Disabled People in Higher Education Institutions. Journal of Entrepreneurship Education (Print ISSN: 1098-8394; Online ISSN: 1528-2651). issue: 3 | Volume: 20 | Month: December

Norris, Sharon E. 2016. Designing Online MBA Programs to Promote Transformative Learning and Knowledge Creation Through Project Based Learning Using The Job Characteristic Model. Handbook of Research on Learning Outcomes and Opportunities in The Digital Age. USA : IGI Global

Nygaard, Claus. Et all. 2009. Learning Outcomes-Politics, Religion or Improvement Chapter 1. Improving Students' Learning Outcomes. Denmark. Copenhagen Business School Press

Passey, Don. Higgins, Steve. 2014. Learning Platforms and Learning Outcomes. London : Routledge Taylor & Francis Group

Potter, Michael K. Kustra, Erika. 2012. A Primer on Learning Outcomes and The SOLO Taxonomy. USA : Centre for Teaching and Learning, University of Windsor

Putnam, A. R. and Leach, Lynn. 2005. *Contextual Teaching with Computer-Assisted*. *Instruction*. Department of Workforce Education and Development 212. Pulliam Hall Southern Illinois University at Carbondale Carbondale, IL. 62901-4605

Sears, Susan. 2003. Introduction to Contextual Teaching and Learning. Indiana : Phi Delta Kappa Educational Foundation Bloomington

Siegel, Donald S. Wright, Mike. 2015. Academic Centrepreneurship : Time for a Rethink ? UK : Enterprise Research Center

Szopa, Anna. Et all. 2015. Competitive Strategies for Academic Entrepreneurship : Commercialization of Research Based Product. USA : Business Science Reference (an imprint of IGI Journal)

Thomas W. Zimmerer, Entrepreneurship *and the New Venture Formation* (New Jersey:Prentice Hall Inc, Norman M. Scarborough. 1996)

Walshok, Mary. L. Shapiro, Josh D. 2014. Chapter 1. Beyond Tech Transfer : More Comprehensive Approach to Measuring The Enterpreneurial University. Academic Entrepreneurship : Creating An Entrepreneurial Ecosystem. Advances in Entrepreneurship, Firm Emergence and Growth Volume 16. UK : Emerald Group Publishing Limited

Zheng, Ping. Callaghan, Victor. 2016. A Cooperative Approach to Academic Enterpreneurial Initiatives. International Journal of Innovation. São Paulo, v. 4, n. 1, pp. 13-22, Jan/Jun. 2016.

HANDS-ON, MINDS-ON AND HEARTS-ON ACTIVITIES IN HIGH SCHOOL SCIENCE TEACHING: A COMPARISON BETWEEN PUBLIC AND PRIVATE SCHOOLS IN NEPAL

Kamal Prasad Acharya, PhD scholar (NORHED-project)
Department of Science Education & Central Department of Education, Tribhuvan University Kathmandu, Nepal
kamalacharya@tucded.edu.np

ABSTRACT
This study examined the comparison among cognitive (minds-on), affective (hearts-on) and psychomotor (hands-on) activities in science instructional practices among the public and private schools of Kathmandu valley. It is carried out on 60 science teachers; thirty from each public and private schools. It used the hierarchical linear modeling (HLM) analyses in which the students and teachers classroom activities were observed relating with emphasizing motivation to learn science, science instructional practices, field visits and excursions, linking science outside the classrooms, improvisation of instructional materials, group activities and science content delivery approach over a period of six months. It was found out that using the practical activities in teaching and learning science showed a high degree positive effect on students' achievement, use of teacher centered lecture method had a remarkably negative effect on the students' achievement in science subject. Public schools were significantly better in doing hands-on and hearts-on activities and are creating a warm and self-motivation to study and learn science comparing with private schools. Private schools were doing better in minds-on activities that is based on recitation of the content.
Keywords: Hands-on, minds-on, hearts-on activities, science performance

CONTEXT

This research study aimed to enhance the knowledge of how school science teachers in Nepal perceive and apply science teaching learning practices by applying hands-on (psychomotor domain), minds-on (cognitive domain) and hearts-on (affective domain) in public and private schools. This research aimed to explore the constructivist approach based on 5E learning cycle i.e., engage, explore, explain, elaborate and evaluate. It outlines how school science teachers applied the techniques of presenting the conceptual and comprehensive aspects of secondary level teaching and learning science. One of the area of this research was to analyze the science teachers' classroom activities were to compare public and private school teachers understanding of the embedded 5E model.

INTRODUCTION

Science is a body of knowledge, a way of investigation, and a way of thinking in the pursuit of an understanding of nature. It is difficult to say the exact definition of science. According to Conant (2008) science is an interconnected series of concept and conceptual schemas that have been development as a result of experimentation and observation (Mohan, 2007, p. 5). Science is accumulative and endless series of empirical observations which result in the information of concepts and theories (ibid). In the same way, the definition of science has given differently as science is scienteing (White, 2005), science is a way of investigation (Green, 1998), science is a certain way of looking at the world (Weinberg and Shabal, 2003), and science is an approach rather than content (Biesant & Biesant, 2005). Similarly, Soti (2005) said that science is the process of construction of knowledge by the observation and empirical evidences (p. 4). From these definitions science can be defined as an accumulated and established knowledge, which has been systematized and formulated with reference to the discovery of general truths or the operation of general laws; knowledge or the search for truth; comprehensive, profound, or philosophical knowledge. In this context, Lavoven (2009) said that without the applications of science, it would have been impossible for human to explore the other planets of the universe. Science teaching helps to underpinning the principles of science in the society (Ucar, 2011). It helps to develop scientific literacy among the people. Teaching science is depending upon the practical, experimental and improvisational activities. Scientifically literate people in this digital world is important for uplifting the overall dimensions of the today's world. According to (Goodrum, 2001), recent reform efforts in science education underline the importance of developing students' scientific thinking skills and scientific literacy.

In science teaching and learning, hands-on activities play a crucial role to understand the real meaning of scientific inquiry which plays a distinctive and pivotal role to increase awareness among the people (Hofstein, et. al. 2008). Activity based students' centered teaching and learning approaches help to uplift students' higher order cognitive skills like analyzing and creating. In this context, McNeill (2009) concluded in his research that students exposed to hands-on science instruction frequently get significantly higher scores in science than those students who experienced only minds-on activities in teaching learning activities. Blending hands-on, minds-on and hearts-on activities help to develop scientific awareness in the secondary level students.

Objectives: Major objectives of this study were to:

- analyse the condition of hands-on, minds-on and hearts-on activities while teaching science in public and private schools;
- explore the use of 5E approach of teaching by the school science teachers in Nepal.

METHODOLOGY

Qualitative and quantitative data were drawn from the Nepalese school science teachers of public and private institutions in 2016 that contained 60 science teachers who were selected through purposive sampling procedure from 10 schools across the Kathmandu valley. This sample consisted of 20 primary teachers, 20 lower secondary teachers and 20 secondary teachers. 30 male and 30 female teachers were purposively selected for the study. The number of science teacher per school in the public and private schools were 3.

Hierarchical linear modeling (HLM) was used in this study to explore the level of activities by school science teachers. According to Luyten, (2008), this method influence on educational outcomes with hierarchical linear modeling. One of the accurate and widely used statistical techniques is the hierarchical linear modeling that helps to analyze data that can deeply analyze the entire educational process. In this context, Willms (1999) argued that strength of hierarchical analysis is that it estimates statistics for each unit of a hierarchical structure using data from that unit while borrowing strength from the information available on all units.

The overall research design of this research was Quan-qual in which statistical tools were used to analyze quantitative data whereas qualitative data were analyzed by thematic approach. Meaning of the data text was derived from the thematic approach of analysis (Miller & Brewer, 2003, p.43).

Analysis and Interpretation of Data

Teaching learning strategies adopted by public and private school science teachers were analyzed on 5E model.

Among 30 science teachers, most of the them (24 out of 30 i.e.80%) in the public schools have adopted 5E modes of teaching using hands-on and minds-on activities blending with hearts-on activities that is they were arising interest in study and only a few science teachers (6 out of 30 i.e., 20%) were used only minds-on activities which is only based on recitation of the content of science. In E1 (engage phase), the performance of public school science teachers were very appropriate at the beginning of the class. They stimulate curiosity and released question based on inquiry approach and link the previous knowledge of students. Public school science teachers in the E2 (Explore phase) was very high. In the same way, in E3, E4 and E5 (Explain, Elaborate and Evaluate) phases, the performance was very high in terms of multimodal explanations. Integrate new approaches learning helps to provide the learning environment to the students to receive and make their own understanding. The details of it is given in the below table. Only few (9 out of 30 i.e., 30%) teachers were used hands-on and minds-on activities whereas (21 out of 30 i.e., 70%) science teachers in private schools were applied only narrative approach of teaching. They entirely based on cognitive approach of teaching and learning.
The applied 5E model used to pursue this study is given below:

Public school teachers	E1 (Engage phase)	Performance
	Stimulating curiosity	Very high
	Set environment	High
	Inquiry arise by asking questions	Very high
	Linking students previous knowledge	Very high

In E1 (engage phase), public school science teachers were using very high performance by arising curiosity to learn, bridging the teaching topic with the previous knowledge of the students and so on.

Private school teachers	E1 (Engage phase)	Performance
	Stimulating curiosity	Low
	Set environment	Low
	Inquiry arise by asking questions	high
	Linking students previous knowledge	Low

In the E1 (engage phase), private school science teachers performance was low in-terms of bridging the knowledge of students, arising curiosity and setting environment to learn. Secondary level science teachers were teaching the topic liquid pressure in both the type of schools. Public school science teachers were motivating students by showing instructional materials such as empty water bottle, needle, beakers, water filled

vessel, syringe, pistons, etc. Students were divided into the group of 4-5 members and asking few questions related the teaching topic to bridge the previous knowledge of students. Teachers asked questions randomly to the students in the class. They arranged classroom setting from traditional to face to face seating arrangement.

Private school science teachers wrote the teaching topic on the white board and started to deliver to the lesson (definition, unit and the formula) of pressure without linking the previous knowledge of students. Most of these did not have the ideas of setting learning environment and arising curiosity of the students. Finally they dictate students to copy the notes.

Public school teachers	E2 (Explore phase)	Performance
	Provide experience of the teaching concept	Very high
	Addressing students' questions and testing relevant ideas	High
	Solving the related problems by investigating the ideas	Very high

Private school teachers	E2 (Explore phase)	Performance
	Provide experience of the teaching concept	moderate
	Inquire into students' questions and test their ideas	low
	Investigate and solve the related problems	High

In the E2 (explore phase), school science teachers from public schools in the Kathamndu valley were doing better than private school teachers. Private school science teachers were doing better to solve questions of the related problems and low in providing experience and know the ideas of students.

Science teachers at the public schools in Nepal have better performance in providing experience the major ideas of science ideas. Teacher help them by solving the queries and problems. Public school science teachers were exploring the concepts of science by engaging students in the well manner.

Public school teachers	E3 (Explain phase)	Performance
	Introduce conceptual ideas, interpret the evidence and construct explanations	Very high
	Construct evidence based multi-modal explanations	High
	Link and compare the explanations provided by students	Very high
	Explain the related but current scientific explanations	moderate

Private school teachers	E3 (Explain phase)	Performance
	Introduce conceptual ideas, interpret the evidence and construct explanations	Moderate
	Construct evidence based multi-modal explanations	Low
	Link and compare the explanations provided by students	Low
	Explain the related but current scientific explanations	Low

In E3 (Explain phase), science teachers dealt the conceptual ideas, construct evidences, linking the previous knowledge of students with the present ideas by public school science teachers were performing better than private school science teachers.

Dealing with the conceptual ideas, explaining multimodal concepts. Linking the ideas of science and discussing current scientific explanations are the key points followed by public school science performance of the above activities is very low in private school science teachers. They ignore the conceptual ideas, scientific explanations and did not linking the ideas.

Public school teachers	E4 (Elaborate phase)	Performance
	Applying new concepts and explanations	High
	Reconstruct and extend explanations	Low
	Integrating different approaches of teaching	High

Private school teachers	E4 (Elaborate phase)	Performance
	Applying new concepts and explanations	Low
	Reconstruct and extend explanations	Low
	Integrating different approaches of teaching	Low

In the same way, science teachers of public schools were performed very high comparing with that of private school science teachers in E4 (Elaborate phase). Extending explanations by inquiring students' previous ideas was seem better among public school science teachers. They blended lecture method with demonstrate and with discussion, collaborative learning method was the major approach of teaching. Science teachers at the public schools were using student centered approach of teaching. The performance of private school science teachers was totally based on teacher centered approach i.e., explanation by lecture method.

Public school teachers	E5 (Evaluate phase)	Performance
	Sharing opportunities for students to reflect students ideas for self-learning pace and to introduce it in new situation	High
	Modify the students' behavior (understanding, beliefs and skills)	High

Private school teachers	E5 (Evaluate phase)	Performance
	Provide an Opportunity to set up for students to provide and review the teaching and learning ideas and apply in new situation	Low
	Modify the students' behavior (understanding, beliefs and skills)	Moderate

In the final E5 phase, public school science teachers were performed far better than private school science teachers in terms of providing opportunities to review and reflect and modify the behavior of students. It shows us that public school science teachers were adopted 5E model of teaching and learning that helps students to understand scientific concepts.

Statistical analysis of hands-on, minds-on and hearts-on activities among the public and private school science teachers

In this section, students' activities were analyzed by the use of statistical analysis.

Table 1. t- test for the hands-on activities between the public and private school science teachers (N=60)

Science teachers	Sample size	Mean	S.D.	Variance	t-value	Remarks
Public schools	30	5.375	1.83	3.34	4.999	4.999>2.00
Private schools	30	12.28	1.954	3.82		
t0.05, 60=2.00						significant at 0.05 levels

This statistical analysis reveals us that the mean of public and private school teachers are 5.375 & 12.28 respectively. The calculated standard deviation and variances were found to be 1.83 and 3.34 respectively for public school teachers. While the calculated standard deviation and variances were found to be 1.954 and 3.84 for the private school teachers. The calculated t-value was found to be 4.99 which is less than the tabulated value (t=2.00) at 0.05 level of significance using two tailed test with degree of freedom 64. This shows that

there is significant difference between public and private school science teachers' in-terms of doing hands-on, minds-on and hearts-on activities.

Table 2. t- test for the minds-on activities between the public and private school science teachers (N=60)

Science teachers	Sample size	Mean	Mean %	S.D.	Variance	t-value	Remarks
Public schools	30	12.28	49.12	1.95	3.82	4.1	4.1>2.00
Private schools	30	16.16	64.62	1.94	3.75		
t0.05, 60=2.00						significant at 0.05 level	

It shows that the mean scores of public and private school teachers were 12.28 and 16.16 respectively. The mean percentages were 49.12 and 64.62 respectively. The calculated standard deviation and variance were found to be 1.95 and 3.82 for public school teachers. While the calculated standard deviation and variance was found to be 1.94 and 3.75 for private school teachers. The calculated t-value was found to be 4.1 which is greater than the tabulated value (t=2.00) at 0.05 level of significance using two tailed test with degree of freedom 60. This shows that there is significance difference between public school and private school teachers.

Table 3. t- test for the hearts-on activities between the public and private school science teachers (N=60)

Science teaches	Sample size	Mean	S.D.	Variance	t-value	remarks
Public schools	30	5.88	1.20	1.45	0.98	0.98<2.036
Private schools	30	5.06	2.11	4.46		
t0.05, 30=2.036					insignificant at 0.05 level	

The data showed that the mean scores obtained in doing hearts-on activities of public school and private school teachers were 5.88 and 5.06 respectively. The calculated standard deviation and variance were found to be 1.20 and 1.45 for public school teachers and standard deviation and variances were found to be 2.11 and 4.46 for public school teachers. The calculated t- value was found to be 0.98 which is less than the tabulated value (t=2.036) at 0.05 level of significance using two tailed test with degree of freedom 30. This showed that there was no significant difference between public and private school teachers on hearts-on activities.

Table 4. t- test for the hands-on and minds-on activities between the public and private school science teachers (N=60)

Science teachers	Sample size	Mean	S.D.	Variance	t-value	Remarks
Private schools	30	5.88	1.20	1.45	13.465	13.465>2.036
Public schools	30	5.69	1.69	2.88		
t0.05, 30=2.036					significant at 0.05 levels	

This analysis shows that the mean scores of private and public school teachers on hands-on and minds-on activities were 5.88 and 5.69 respectively. The calculated standard deviation and variance were found to be1.20 and 1.45 for the private school teachers while the calculated standard deviation and variances were found to be 1.69 and 2.88 for public school teachers. The calculated t-value was found to be 0.16.which is less than the tabulated value (t=2.036) at 0.05 level of significance using two tailed test with degree of freedom 30. This shows that there was no significant difference between the public and private school science teachers on hands-on and minds-on activities.

Table 5. t- test for the hands-on, minds-on and hearts-on activities between the gender at public and private school science teachers (N=60)

Science teachers	Sample size	Mean	S.D.	Variance	t-value	Remarks
Male	30	5.69	1.49	2.23	3.221	3.221>2.036
Female	30	11.81	2.14	4.56		
t0.05, 30=2.036					significant at 0.05 levels	

It shows that the mean scores of male and female teachers were 5.69 and 11.81 respectively. The calculated standard deviation and variance were found to be 1.49 and 2.23 for male teaches while the calculated standard deviation and variance was found to be 2.14 and 4.56 for female teachers. The calculated t-value was found to be 3.221 which is greater than the tabulated value (t=2.036) at 0.05 level of significance using two tailed test with degree of freedom 30.

This shows that there was significant difference between two mean scores on male and female teachers. Hence, the null hypothesis was rejected and alternative hypothesis was accepted. Male secondary school science teachers had better performance in doing activities than female science teachers.

CONCLUSION

The challenges faced by the mushrooming private schools in Nepal in terms of science teaching and learning is a great problem. The school system has to deal with poor teachers quality and increasing students and societal expectations, Nepal government has to make some sorts of arrangements to provide the teacher education system with an environment encouraging innovation and meeting the need of the schools. The major conclusion of this study is that science teachers at the public schools in Nepal have better performance in doing all sorts of activities that help to aware and increase inquiry oriented science learning in both the types of schools in Nepal. The overall performance of public school science teachers is significantly better than the performance of private school teachers. Furthermore, for very few science schools teachers at the public schools in Nepal produced innovative teaching and learning environments for the high quality science achievement. The overall impression public school science teachers is significantly high as compared with private school science teachers in their pedagogical practice towards innovative science practices such as inquiry-oriented science and use of the 5E learning cycle often takes in excess of a year.

Science instructional practices help to increase science achievement by relating cognitive (minds-on), affective (hearts-on) and psychomotor (hands-on) activities. In the hands-on learning pedagogical style, school science teachers were able to learn from experiments conducted either on the laboratory or during the excursions conducted by the school, showed the substantial positive effect on science achievement. Teachers who employed hands-on activities blending with minds-on and hearts-on activities in science lessons led to higher achievement in science than those who did not employ hands-on activities.

Analysis of minds-on activities of public and private school science teachers showed that calculated t-value (4.1) greater than the tabulated (t= 2.03) at 0.05 level of significance at degree of freedom 30. Public school science teachers were significantly better than teachers teaching at private schools. Minds-on activities were analyzed on the basis of motivation, explanation, teaching techniques, peer interactions, collaboration and recapitulation of the context delivery of the science teachers.

Analysis of the motivation of the students and to develop craze and motivation to study science both the public and private school science teachers show similar concern. Calculate t-value (0.98) is less than (t-2.03) at 0.05 level of significance. Furthermore, male science teachers were significantly better than female science teachers in doing hands-on, minds-on and hearts-on activities in relation to science teaching at the schools of Nepal.

Public school science teachers in Nepal have high performance of doing hands-on and hearts-on activities that have positive and influential effects on students' conceptual and understanding, their practical and intellectual skills, and their understanding of the nature of science. Hence, teachers can play a crucial role in helping students have productive experiences to promote the desired learning and their subsequent performance in science. Science learning cycle is a way of planning of science education and consistent with contemporary theories about how students learn.

Acknowledgements

This article grew out of the insights gained in course of my PhD pursuit which was:

i. registered with the Graduate School of Education, Faculty of Education, Tribhuvan University.

ii. inspired by the fellowship for PhD student awarded by NORHED-project, Norway.

Therefore, I would like to acknowledge both of the institutions as well as Prof. Dr. Chitra Bahadur Budhathoki, my PhD supervisor, Prof. Dr. Rajani Rajbhandary and Kamal Kumar Poudel for their insightful guidance and encouragement.

REFERENCES

Feasey, R. (2012). Thinking and working scientifically. In K. Skamp (Ed.) *Teaching primary science constructively* (4th ed.)(pp. 55-98) Melbourne: Cengage Learning.

Goodrum, D., Hackling, M., & Rennie, L. (2001). *The status and quality of teaching and learning of science in Australian schools*. Canberra, Australia: Department of Education, Training, and Youth Affairs. Greene, B. A.

Hofstein, A., Kipnis, M., & Kind, P. (2008). Learning in and from science laboratories: Enhancing students' metacognition and argumentation skills. In C. L. Petroselli (Ed.), *Science education issues and developments* (pp. 59–94). New York: Nova Science.

Lavonen, J., & Laaksonen, S. (2009). *Context of teaching and learning school science in Finland: Reflections on PISA 2006 results.* Journal of Research in Science Teaching, 46, 922–944. doi:10.1002/tea.20339.

Levitt, K. (2001). *An analysis of elementary teachers' beliefs regarding the teaching and learning of science. Science Education, 86*, 1-22.

Luyten, H., Peschar, J., & Coe, R. (2008). Effects of schooling on reading performance, reading engagement and reading activities of 15-year-olds in England. *American Educational Research Journal, 45*, 319–342. doi:10.3102/0002831207313345.

Marek, E. (2009). Genesis and evolution of the learning cycle. In In Roth, W & Tobin, K. (Eds.). *Handbook of research in North America* (pp. 141-156). Rotterdam: Sense Publishers

McNeill, K. L. (2009). Teachers' use of curriculum to support students in writing scientific arguments to explain phenomena. *Science Education, 93*, 233–268. doi:10.1002/sce.20294.

Miller, R. B., & Brickman, S. J. (2004). A model of future-oriented motivation and self-regulation. *Educational Psychology Review, 16*, 9–33. doi:10.1023/B:EDPR.0000012343.96370.39.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.

Ucar, S. (2011). How do pre-service science teachers' views on science, scientist. And science teaching change over time in a science teacher training program/? Journal of Science Education and Technology, 21 (2), 255-266.

Willms, J. D. (1999). Basic concepts in hierarchical linear modeling with applications for policy analysis. In G. J. Cizek (Ed.), *Handbook of educational policy* (pp. 473–493). New York: Academic Press.

Biographical notes

Mr. Kamal Prasad Acharya, is the Lecturer of Science Education, teaching at the Department of Science Education, Central Department of Education, University Campus, Tribhuvan University, Kirtipur, Kathmandu, Nepal. He teaches science pedagogy and research methodology to the graduate and post graduate level students and doing science education research projects in Nepal. He is the author of science education peer reviewed research articles in the field of science curriculum, classroom practices, instructional materials, science teacher training and evaluation. He is the PhD scholar of NORHED-project under the Graduate School of Education, Tribhuvan University, Nepal.

INTEGRATED MODULE LEARNING IN ACCOUNTING: EVIDENCE OF INDONESIA

Agung Listiadi
Surabaya State University Indonesia
agung296@gmail.com

ABSTRACT
Learning outcomes of each learner will be different, because every student has certain limitations that are different from other learners in terms of capability and mastering the material, even if the object / the same assessment criteria. For the learning modules that match the characteristic of learners very supportive in improving learning outcomes. The module is basically a self-instruction. Therefore, the module emphasizes learning through active role of learners to learn your self. The aim of research to determine differences in learning outcomes before and after application of the accounting module spreadsheet-based trading company and an integrated spreadsheet. To determine the difference in experimental design used models one group pretest-posttest, with respondent's students majoring in accounting education. The results showed there are differences in learning outcomes convincing before and after using the accounting module spreadsheet-based trading company and an integrated spreadsheet. The use of modules in learning more feasible in bringing about innovation and creativity in students this case because it focuses on the individual skills of learners. Learning to use the modules making learners can measure their own abilities and be able to improve their own abilities without feeling pressured.

INTRODUCTION

Education has a very important role in life. Through education, acquired knowledge that is important for human life. Knowledge would be useful if well understood and can be applied. Knowledge is not a set of facts, concepts or rules that are ready to take and remember, but it must be found itself in order to become more meaningful so that learners will be easy to understand and remember. Education is a vehicle to improve and develop the quality of human resources and important to the advancement of the nation. Psacharopoulos (2004) suggests education is an investment in the future. Development in the field of education are being implemented with the hope of improving the quality of education and can solve various problems faced by the world of education, according to Misra (2012), especially in the era of globalization is full of a wide variety of educational challenges must be modernized. Curriculum renewal that continues to do so at this time the Indonesian government is one of the government's efforts in the development of education in order to achieve a quality community in the mastery of science and technology.

According to Handler (2010) the successful implementation of this curriculum is strongly influenced by the ability of educators in implementing the curriculum. Educators are considered to know and understand the state of the school so that the way of achievement of competencies is the authority of educators for creativity through learning device, learning strategies, teaching methods and evaluation. Skills and competences of the educator are very helpful in achieving successful learning. For that an educator is required to be able to determine and select a suitable learning strategies and varied. According to Robertson (2008) every educator has the ability, the ability of the affected individuals, or Congenital and environmental factors. Therefore, the ability of educators needed in his job as a teacher to deliver learners implementing the learning process actively. The learning activities are essentially a two-way communication activities is communication between learners and educators with communication between learners. So, we need good communication between educators with learners, learners with learners, and students with learning resources. The learners have different abilities in capturing information, students who have the ability to learn quickly will more easily absorb the material provided but slow learners who study would require a longer time to understand the material provided.

TEACHING MATERIALS

According to Hopkins (2000) Learning is a process of change in behavior of the individual self, thanks to the interaction between the individual and the individual with the environment. While understanding the learning according Rowe (2013) Learning is a process attempts person to obtain a new change in behavior as a whole, as a result of his own experience in interaction with the environment. From the above it can be concluded that the notion of learning is a process of change within the individual behavior that looks at changes in attitudes, understanding, skills and knowledge of individuals in the learning process. According to DeWitt (2014) Teaching is conveying

knowledge, passes on culture and provides tutoring to students so that they can assist learners in the face of people's everyday lives.

The materials in question may be written or unwritten material. Teaching materials or curriculum (curriculum material) is the content or the curriculums that must be understood by learners in an attempt achieve the objectives of the curriculum. Material of teaching or learning materials (instructional materials) generally consists of knowledge, skills, and attitudes learned that should learners in where with order to achieve the standards of competence specified. Teaching materials are usually equipped with a variety of illustrations. Illustrations plays an important role in teaching materials, as they may clarify concepts, messages, ideas, or ideas presented in teaching materials. In addition Illustration interesting plus proper layout can create interesting teaching materials to be studied. In detail, the types of learning materials Consist of knowledge (facts, concepts, principles, procedures), skills, and attitudes or values that must be learned learners in order to achieve competency standards have been determined. Materials or curriculum materials can be sourced from various disciplines both clump of social sciences (social science) and natural sciences (natural science). Furthermore to note is how the scope and breadth of materials depth or contents in any field of study. The main components of teaching materials are: a) review of the material, b) introduction to each chapter, c) the closing of each chapter, d) bibliography, and e) lists. Each component has sub-sub-components that are integrated with one another.

MODULES

The module is a process of learning about a given subject unit is arranged systematize, operational, and targeted for use by learners accompanied with the user guidelines for educators (Norlidah, 2012). According to Robinson (1972), the module is one form of teaching materials that are packed full and systematic, are contained within a set of learning experiences are planned and designed to help learners master the specific learning objectives. The module serves as a means of learning which is independent, so that students can learn independently according to their own pace. Based on some understanding of the module above it can be concluded that the learning module is one form of teaching materials that are packed in a systematic and attractive so it is easy to learn independently.

Learning module is one of the learning materials that can be used by students independently. Modules are either to be arranged in a systematic, interesting, and clear. Modules can be used anytime and anywhere according to the needs of learners. Learners can study individually; he studied with active without the aid of a maximum of educators. Specifically formulated learning goals. Formulation of interest rooted in a change in behavior. Interest specially formulated so that the change in behavior that occurs in self-learners can immediately know. Changes in behavior are expected to complete 75% mastery (mastery learning), opening the opportunity for learners to advance sustainable according to their ability. The module is a teaching package that is self-instruction, with a study like this; the module opens the opportunity for learners to develop themselves optimally.

Power modules have enough information. Element association, structure, and sequence of lessons formed such that learners spontaneously learn. The module provides many opportunities for learners to do active. Structuring module aims to help the participants learn to learn the material. One module is set up to teach a specific material so that participants learn to achieve certain competence. The structure of writing a module is often divided into three parts: the opening section, the core and the cover portion.

LEARNING OUTCOMES

After teaching and learning activities are expected to change their behavior so that it can be seen through the evaluation of learning outcomes of students. The result of learning is the result obtained learners of the learning process which appears in the form of overall behavior (comprehensive), which consists of elements, effective and psychomotor are integrated on self-learners (Khalid, 2012). Learning outcomes are the result of an evaluation of learning activities to learners after learning activities in an effort to achieve the learning objectives have been applied (DeWitt, 2014). From the above it can be concluded that the study result is an assessment of the progress and success of students after an effort and activity in acquiring knowledge. In principle, the ideal learning outcomes covering the entire psychological domain that changed as a result of travel and learning process of students, described (Stoyanova et al, 2002). From the opinions on the notion of learning outcomes is basically a change or ability possessed by students after receiving the information submitted by educators in the process of learning - teaching.

Psychological domain as a result of learning are: the domain of copyright (cognitive) includes observation, memory, petition, application, analysis, and synthesis. The domain of taste (affective) includes reception, welcome,

appreciation, internalization, characterization; the domain of intention (psychomotor) includes moving and acting skills, verbal expression of non-verbal skills. (Rowe, 2013). Assessment of learning outcomes is a process of giving value to the learning outcomes achieved learners with certain criteria (Hopkins, 2000). Assessment of learning outcomes in essentially completeness adjusted to standard set by the school. That is said to be successful learners in the learning of certain subjects if they meet specified completeness. Instructional media plays an important role in the achievement of learning outcomes by optimal.

METHODOLOGY

To test the hypothesis, then used the design of experiments, the experiment is one of many research methods applied to all areas of science. The main characteristic of an experimental study that their treatment (treatment) conducted research on the subject of research. Treatment to function as an independent variable, treatment is done is to give students trading company based accounting modules and integrated spreadsheet. In this study using undergraduate respondents of accounting education. As for the design of experiments designed is Pre experimental model of one group pretest-posttest In this study, to test the hypothesis used to test Independent, to determine whether there is difference in learning outcomes before and after using the accounting module trading company based spreadsheet and integrated spreadsheet.

FINDINGS

The module is a means of organizing the subject matter is concerned about the function of education. Organizing strategies of learning materials containing sequencing which refers to the making of the order of presentation of the subject matter, and synthesizing that refers to the attempt to demonstrate to students the relationship between facts, concepts, procedures and principles contained in learning materials. To design learning materials, there are five categories of capabilities that can be learned by the learners, verbal information, intellectual skills, cognitive strategies, attitudes, and motoric skills. Organizing strategies learning material consists of three stages of the process of thinking, namely the establishment of the concept, the concept interpretation and application of the principle. These strategies play a pivotal role in designing the study. Its usefulness can make students more interested in learning, students learn departed from Prerequisites automatic, and can improve learning outcomes. The use of modules is often associated with independent learning activities (self-instruction). Because its function as mentioned above, the other consequences that must be met by this module is the completeness of the contents; meaning that the content or material grain of a module must complete unassisted through dish-dish so with so readers feel quite understand the specific field of study of the results of learning through this module.

The module is a tool or learning tool containing materials, methods, limitations, and how to evaluate systematically designed and attractive to achieve the expected competencies in accordance with the level of complexity. To determine whether there is difference in learning outcomes before and after using the accounting module-based trading company and an integrated spreadsheet using independent t test, where we tested is the pretest and post-test. The calculation result of hypothesis testing by independent t test was as follows:

Table 1. Independent samples test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	31.105	.000	3.024	84	.003	3.69767	1.22273	1.26614	6.12921
Equal variances not assumed			3.024	53.852	.004	3.69767	1.22273	1.24609	6.14925

Based on the results of independent t test in Table 1, the calculated values generated at the level of 95% smaller than $\alpha = 5\%$. Thus it can be stated Ho rejected and Ha accepted. So it can be stated that there are differences

in learning outcomes convincing before and after using the accounting module and spreadsheet-based trading company integrated spreadsheet.

Table 2. Results of the mean difference test

	VAR00001	N	Mean	Std. Deviation	Std. Error Mean
FS	dimension1 1.00	43	73.9535	2.84482	.43383
	2.00	43	70.2558	7.49633	1.14318

Based on Table 2, the mean value for the pre-posttest experimental group amounted to 73.9 while the mean value of pre-posttest control group of 70. Thus, the average value of pre-posttest experimental group was higher than the pre-posttest group control. The provision of pre-tests on respondents was conducted before the respondents were learning about the preparation of financial statements for a merchandising business using trade accounting module with a spreadsheet in the first half of the semesters. Furthermore, the treatment (treatment), treatment is done by providing accounting module spreadsheet-based trading company on the respondents. In this treatment of respondents use learning modules integrated trading company accounting spreadsheet accompanied by ICT in the form of computer (notebook).

With the spreadsheet had been prepared in the accounting module used as a trading company that this treatment, more respondents can understand the cycle of trading company's financial statements. Spreadsheet in this module integrates with spreadsheet format existing in the computer (notebook). The use of ICT in the form of computer (notebook) in accounting learning attracts the attention of respondents. At the end of the study, done post-tests on respondents to assess learning outcomes. Having held post-tests on respondents, the results obtained by different tests. The final result can be seen from the analysis of the pre-test and post-test as in Table 1 and 2. In table 1 show that after getting treatment with learning modules integrated trading company accounting spreadsheet obtained by the average value of pre-posttest for the control group of 70 and the experimental group after getting treatment obtain the average value of 73.9. Results of study respondents experienced an increase after the use of the learning module learning modules integrated trading company accounting spreadsheet.

Learning with the help of accounting module spreadsheet-based trading company gives respondents an opportunity more actively to build an understanding of the material being studied. Assisted in the learning process with the module is designed in such a way to provide a wide range of creative content, which aims to build / construct knowledge about the material being studied. The modules have been designed can be used by respondents for independent learning in the classroom and at home so it does not depend on the teacher. The module is basically a self-instruction. Therefore, the module emphasizes learning through active role respondents to teach you. Nonetheless, the learning module does not absolve the role of teachers in the classroom. Accounting subjects is one of the subjects who had a procedural nature. In addition, the level of complexity of accounting has high teaching materials.

Implementation of the modules have a positive influence on learning, media modules can increase the percentage of students learning completeness and liveliness during the learning process. Implementation module through this experiment with the material accounting cycle trading companies can reduce misconceptions, increase interest, activities, learning outcomes, computer literacy, and student response. Accounting module integrated trading company spreadsheet that is a set of teaching materials such as books presented systematically with the aim for students to learn independently with or without the guidance of a teacher. Inside the module there is a description of the material on the accounting cycle trading company that originated from the journaling activities to the financial statements. Their instructions for using the module will assist teachers and students in using the module. In addition formative tests, their practicum accounting cycle trading companies conducted by students can also be used to measure the level of student mastery of the material accounting cycle trading company. Students are required to complete the accounting cycle case study about a trading company during a certain period in the practicum. The existence of the answer sheet provided in the resolution of practical problems that will make students more easily in completing practicum. By this learning will be more effective study results on the material accounting cycle trading company that achieved from the learning activities can be optimal. The purpose of the media of this module is to help students more easily understand the accounting cycle of a company, especially in the accounting cycle trading company through the material presented in the module. Students can also learn the accounting cycle start journaling activities up to prepare financial statements in their entirety by this module through practical activities with answer sheet facility. In addition, this module can also be used as an additional source of learning because in this module also contained material accounting cycle trading company. Teachers also can use it as a bridge in delivering course

material to make it easier. Communication between students and teacher can be better. With so many benefits to be obtained either by teachers and students when using this medium as a partner of study.

CONCLUSION

The module is considered one of the teaching materials effectively and efficiently. Based on the results of different test Wilcoxon show results there are differences in learning outcomes convincing before and after using the accounting module and spreadsheet-based trading company integrated spreadsheet. Aided learning module is a business organization of individual learning that enables learners to master the lesson material unit. To improve the quality of modules necessary to develop their electronic modules. The development of ICT-based modules can use the program of Adobe Flash CS5. Through the program, Adobe Flash CS 5 has the advantages of easy control access learning pages, in addition to the electronic module can display animations, text, images and video that cannot be done through paper-based modules.

REFERENCES

DeWitt Dorothy. 2014. Collaborative Learning: A Module for Learning Secondary School Science. *International Forum of Educational Technology & Society (IFETS). Educational Technology & Society*, 17 (1), 89–101.

Handler Beth. 2010. Teacher as Curriculum Leader: A Consideration of the Appropriateness of that Role Assignment to Classroom-Based Practitioners. *International Journal of Teacher Leadership* Volume 3, Number 3, winter 2010.

Hopkins, D. (2000). Powerful learning, powerful teachers and powerful schools. *Journal of Educational Change*, 1, 135-154.

Khalid Abida et all. 2012. Constructivist Vs Traditional: Effective Instructional Approach in Teacher Education. *International Journal of Humanities and Social Science* Vol. 2 No. 5; March 2012.

Laffey, J. M. & Singer, J. (1997). Using mapping for cognitive assessment in project-based science. *Journal of Interactive Learning Research*, 8, 363-387.

Misra Srikant. 2012. Implications of Globalization on Education. *Romanian Journal for Multidimensional Education* ISSN: 2066 – 7329 (print), ISSN: 2067 – 9270.

Norlidah Alias. 2012. Design and Development of Physics Module based on Learning Style and Appropriate Technology by Employing Isman Instructional Design Model. *The Turkish Online Journal of Educational Technology* – October 2012, volume 11 Issue 4.

Psacharopoulos George. 2004. Returns to Investment in Education: A Further. *Journal Education Economics*, Vol. 12, No. 2, August 2004.

Robertson Ian 2008. VET Teachers' Knowledge and Expertise . *International Journal of Training Research* . Volume 6, Number 1, 2008 pp 1-22.

Robinson W Jerry. 1972. Learning Modules: A concept for extension educators. *Journal of extension* 1972.

Rowe Frances A. 2013. Instructional Design Interventions for Supporting Self-Regulated Learning: Enhancing Academic Outcomes in Postsecondary E-Learning Environments. *Journal of Online Learning and Teaching* Vol. 9, No. 4, December 2013.

Stoyanova, N. & Kommers, P. (2002). Concept mapping as a medium of shared cognition in computer-supported collaborative problem solving. *Journal of Interactive Learning Research*, 13, 111-133.

NARRATIVE INQUIRY CURRICULUM: A NEW APPROACH TO THE PROFESSIONAL DEVELOPMENT OF STUDENT-TEACHERS AT FARHANGIAN UNIVERSITY

Farhad Seraji[1], Zohreh Karami[2], Mohammad Attaran[3]
1.Associate Professor of Curriculum Development at Bu-Ali Sina University of Hamadan, Iran.
2. Assistance Professor of Curriculum Development at Farhangian University, Tehran, Iran
3. Senior Lecturer of the Department of Curriculum and Instructional Technology at University of Malaya
fseraji@gmail.com

ABSTRACT
This study was conducted to investigate the role of narrative inquiry curriculum in the professional development of student-teachers at Farhangian University of Iran. This is a quasi-experimental study including a pretest, a posttest, a control group, and an experimental group. The statistical population included the student-teachers of Farhangian University at Shahid Bahonar Campus in Hamadan. The students studying elementary education were selected as the research sample. Then the experimental and control groups were selected randomly. The experimental group was trained in narrative inquiry curriculum based on the professional development for one semester, and the control group was trained in the narrative inquiry curriculum designed by Farhangian University. Both groups were evaluated using a researcher-made tool before and after the training programs. Multivariate ANCOVA was employed to analyze the results. After conducting the training programs, the two groups were significantly different in knowledge, competence and attitude. Involving student-teachers in the narrative inquiry curriculum with the purpose of professional development can change their roles to the creators of knowledge. It can also develop their knowledge, competence and attitudes.
Keywords: narrative inquiry curriculum, narrative research, teacher professional development, student-teachers, Farhangian University

INTRODUCTION

Education is the most important factor in the development of a country. In this regard, teachers and their professional capabilities serve as the key element to enhance the quality of the education system. With the development of paradigmatic changes in teacher training nowadays, the necessary criteria for training qualified teachers have completely evolved. In the past, a teacher had to learn knowledge and skills and convey them to the next generation; however, this method does not meet the needs of our changing society now. A teacher should be equipped with the teacher-centered research methods to turn into a lifelong learner for professional development. Although research-centered methods are emphasized today for the professional development of teachers, they have not been entirley pervasive yet, and the main focus is on the transfer of knowledge, competence and attitudes. With this approach, it can never be possible to train lifelong learners.

The research results in Iran indicate that the majority of teachers are not lifelong learners. Karimi (2008) reported that elementary school teachers were not at acceptable levels in educational, teaching, scientific, behavioral, characteristics, social, intellectual, managerial, functional, moral, lifelong learning and technological competencies. Regarding the evaluation of teachers' professional competencies, Danesh Pazhouh & Farzad (2006) indicated that most of the elementary school teachers would associate the curricula with a real life less adequately and often try to convey the contents to them through inactive methods. One of the causes of this problem can be found in teacher training methods in the past when the materials were often conveyed theoretically; therefore, teachers failed to associate the learned materials with practice after taking the job. The lack of relationship between theory and practice prevents teachers from using what they learn; thus, they face many problems in practice. Darling-Hammond & Hammerness (2005) hold the belief that students often experience a dissociation and lack of relationship between what they are given as a theory in their lessons and what they practice in real classes with experienced teachers and students. The gap between theory and practice is one of the most serious problems of student-teachers. Moreover, the teaching practicum experience, serving as a bridge to fill the gap, does not fully prepare them to face the complications of full-time teaching (Grudnoff, 2011). Therefore, research and practice methods can be used to decrease this gap. To Tryggvason (2009), previous studies in Finland indicated that teacher training methods mostly faced problems in integrating theory and practice; however, recent national studies showed that research-centered studies had good results. Nowadays there is an accepted principle in Finland that teacher-training courses should supply teachers with the research-based knowledge, competencies, and methods to improve teaching and learning.

According to Miner *et al*. (2010), research-based learning develops high-level learning and creative thinking skills (as cited in Clayton & Kilbane, 2016). Narrative inquiry is one of the research-based plans intended for the professional development of teachers based on learning through thoughtful experience and practice. This type of learning emphasizes problem solving and conceptualizing by thinking in action (Dewey, 1929; as cited in Ord, 2012). It enables teachers to identify and interpret key problems in their classrooms (Meier & Henderson, 2007). The narrative approach to teacher-training was based on the idea that meaning is created through thinking, and thinking results in perception which leads to action. Regarding teaching staff, thinking can be put into new activities (Phillion, 2005, p.6). The practical theories of student-teachers are developed through action-based thinking (Abou, 2007). They observe and evaluate their experiences and thoughts by thinking; as a result, thinking can be a key element in the professional development of student-teachers.

Narrative researchers have considered various approaches to teacher training such as regarding student-teachers as teaching researchers and curricula planners (Kükner & Orr, 2016). If teachers are equipped with professional knowledge and customized practical knowledge, they will be the lesson planners at schools (Wong, 2003). The idea of teachers as lesson planners was first introduced by Connelly and Clandinin (1988). Then they proposed the idea of teachers as the creators of curricula in 1992. In this idea, teachers were supposed to create curricula along with students (as cited in Parker, Pushor, & Kitchen, 2011). The idea of teachers as curriculum developers indicates how previous situations can form or change future experiences (Connelly & Clandinin, 1988). Based on this idea, Xu (2011) introduced the idea of the curriculum of life and stated that it was based on the notion that curricula could be a practical lesson of life which can be acquired through narrative inquiry. Huber, Murphy and Clandinin (2011) proposed to ask teachers to write their autobiographies as narrative inquiries. This task, would let them experience the creation of and answer their questions thoughtfully (Kelchtermans, 2014).

With regard to the research literature, it can be stated that narrative methods have been used in the plans designed for the professional development of teachers in different countries (Roziter & Clark, 2007; as cited in Bishop, Berryman, Cavanagh, & Teddy, 2009). For instance, the findings of a study carried out by Smith (2012) indicated that narrative-based professional learning would contribute to the professional development of novice teachers. According to Le Fevre, (2011), autobiographies of student-teachers could be used as curricula to build a bridge between action and theory.

Nowadays narrative inquiry is a key component of the regular professional development plans for high school teachers in New Zealand. Teachers' narratives of high school students are used as the main source and a tool to understand how students experience school. Students' narratives enable teachers to investigate their teaching methods, beliefs, activities and their impacts on students (Bishop, Berryman, Cavanagh, & Teddy, 2009).

According to Latta & Kim (2009) the importance of narrative research in professional development can be extracted from Bruner's thinking (2002) and that of other philosophers such as Carr (2000), Dewey (1938), Ricoeur (1991), Gadamer (1964), and MacIntyre (1986). Latta & Kim (2009) concluded that narrative inquiry could create a constructive atmosphere in the classroom for the professional development and improvement of a professional learning culture. A research project conducted by Moss, Springer and Dehr (2008) investigated the relationship of professional development with professional development and thinking. In this project, the teachers were involved in writing narrative stories, and narrative inquiry provoked their thoughts in the form of teacher-centered research (McNiff, 2007). Soreide (2006) used the observation techniques to investigate five elementary school teachers and observed that they used narratives effectively to make their professional identities. As a research method, the narrative inquiry can help teachers create their knowledge. Fairbanks & LaGron (2006) evaluated the methods by which teachers created knowledge through discourse in a research group. The findings revealed that that teachers' learning and teaching through discourse on theory and action were changed to support their research efforts. To McVee (2004), teachers can use narratives as tools to express their opinions on theories, practice, and curricula.

Kelchtermans & Hamilton (2004, p. 804) believe that professional development of teachers, experience and narrative are closely related (as cited in Schlein, 2007). Rushton (2001) used narratives to enhance the self-efficiency of a student-teacher during the teaching practicum and obtained effective results. Conle (2000) used narrative inquiry as a tool for the professional development of pre-service teachers. As a consequence of this study, teachers achieved professional development before service by getting involved in the narrative inquiry. In some seminars held on teacher training in some institutes in 1980, the narrative inquiry was used as an effective tool in the curricula of students (Grumet, 1988). Teachers can acquire practical knowledge through narrative inquiry. Moreover, a kindergarten teacher gained practical knowledge on how to work in a class by using narrative inquiry (Clandinin, 1989). Connelly & Clandinin (1988) employed narrative inquiry for teacher training. According to their studies, student-teachers made their knowledge by focusing on professional actions with the help of narrative inquiry.

Given what has been discussed, the importance and role of narrative inquiry in the professional development of teachers and student-teachers are evident. However, the above-mentioned studies were all conducted outside Iran, and it is necessary to carry out such a study in Iran. The current study is aimed at investigating the role of narrative inquiry curricula in the professional development of student-teachers to draw a clear path for the professional development of teachers and student-teachers.

The findings of the above studies indicate that experience is the foundation of learning, and a student-teacher can extract meanings and concepts by thinking about his or her actions and notions. This type of learning can build a bridge between theory and action. These studies indicate that narrative inquiry can help the professional development; however, they do not specify the fundamental aspects for the professional development of teachers which includes different dimensions. Student teachers should acquire the necessary competence in teaching, methods, teaching techniques, using technology in teaching, assessment methods, etc. This study investigated the aspects of the professional development of teachers based on the model proposed by Koehler & Mishra (2009). In this model, the professional competencies of a teacher are as follows: content knowledge (it is a teacher's knowledge of teaching contents.); pedagogical knowledge (it is a teacher's profound knowledge about teaching and learning processes, approaches and methods.); pedagogical content knowledge (it is a teacher's deep knowledge of the educational methods and approaches to teaching the subjects.); technological knowledge (it is about the ways of using technology for teaching.); technological content knowledge (it is the knowledge of presenting subjects through technology.); technological-pedagogical knowledge (it is the knowledge of using technology to implement teaching methods.); technological-pedagogical content knowledge (it includes the knowledge of using technology to implement constructive teaching methods to teach the subjects).

Narrative inquiry is used in two ways: as a research method and as a tool for professional development. A course named Professional Research and Development 1 (Narrative Inquiry) has been put in the curricula of Farhangian University recently. It is meant for the professional development of student-teachers. However, a narrative inquiry has been introducing as a research technique, and it has not been designed for the professional development of teachers. Therefore, the aim of this study is to use narrative inquiry as a tool for the professional development and evaluate its role. The results of this study can be employed by the executors of the teacher professional development plan at Farhangian University to help redesign the curriculum. According to the proposed model, student-teachers make their own knowledge, competence and professional attitudes by involving in practical situations and using narrative inquiry. What distinguishes this model from other teacher professional development models is the fact that the roles of student-teachers are changed to knowledge makers through thoughtful actions in different aspects of professional development. Through this model, student-teachers will become knowledge makers. They acquire professional knowledge, competence and attitudes by applying narrative inquiry to different areas. They also achieve stable and genuine learning by establishing relationships between theory and practice. Accordingly, they aim of this study is to investigate the role of narrative inquiry in the professional development of student-teachers at Farhangian University. The primary and secondary research hypotheses are as follows.

The Main Hypothesis

The narrative inquiry curriculum has an impact on the professional development of student-teachers.

The Sub-Hypotheses

1. The narrative inquiry curriculum has an impact on the professional knowledge of student-teachers.
    1-1. The narrative inquiry curriculum has an impact on the content knowledge of student-teachers.
    1-2. The narrative inquiry curriculum has an impact on the pedagogical knowledge of student-teachers.
    1-3. The narrative inquiry curriculum has an impact on the technological knowledge of student-teachers.
2. The narrative inquiry curriculum has an impact on the professional competence of student-teachers.
    2-1. The narrative inquiry curriculum has an impact on the pedagogical content knowledge of student-teachers.
    2-2. The narrative inquiry curriculum has an impact on the technological-pedagogical content knowledge of student-teachers.
3. The narrative inquiry curriculum has an impact on the professional attitudes of student-teachers.

METHODOLOGY

This research is a quasi-experimental study including a pretest, a posttest, a control group, and an experimental group. The narrative inquiry curriculum was the independent variable, and the professional development of student-teachers was considered the dependent variable including three dimensions: knowledge, competence and attitude. The statistical population included the student-teachers of Farhangian University at Shahid Bahonar Campus in

Hamadan. The students studying the elementary education (200 individuals) were selected as the research sample. Then they were randomly divided into an experimental group with 42 participants and a control group with 40 participants.

The data collection tool was a researcher-made tool based on the teacher professional competence model designed by Koehler and Mishra (2009). This instrument included three dimensions: knowledge, competence and attitude. Knowledge has three subtests: content knowledge, pedagogical knowledge, and technological knowledge. Competence has two subtests: pedagogical content knowledge and technological-pedagogical content knowledge.

The reliability of the research tool was evaluated by experts. After the items had been reviewed by 20 experts in education sciences with teacher professional competencies, the inappropriate items were deleted, and some of them were corrected. After correction, all the experts confirmed the reliability of the items. The Cronbach's alpha was used to analyze the data after conducting the test in a group including 50 participants. Table 1 shows the results.

Table(1)

Before implementing the plan, the research tool was used to measure the knowledge, competence and attitudes of student-teachers in the two groups. Then the experimental group was trained in the narrative inquiry curriculum based on the professional development of teachers for one semester, and the control group was trained in the narrative inquiry curriculum designed by Farhangian University. The main aim of narrative inquiry curriculum based on the professional development of teachers is that student-teachers can improve their knowledge, competence and attitudes by getting involved in different projects of narrative inquiry. Student-teachers analyzed biographies, narratives of experienced teachers, narratives experienced by themselves, and narratives of other student-teachers by using various methods such as interviews. They wrote some narratives of classes by observing classes taught by teachers at schools and analyzed the narratives to extract the essential meanings. Then they obtained the necessary knowledge, competence and attitudes. Student-teachers negotiated in seminars on the findings and knowledge to link theories with actions. The control group received training in the narrative inquiry curriculum designed by Farhangian University during one semester. In this plan, the main purpose was to acquaint student-teachers with the narrative inquiry technique which they were supposed to use Teaching Practicum 1 to do the defined project accordingly. Both groups had the chance to take part in the teaching practicum classes and communicate with teachers during one semester to execute their projects. The difference between the control and experimental groups was the fact that narrative inquiry was used as a method for the professional development of student-teachers in the experimental group. However, it was regarded as a research method in the control group in which the student-teachers were supposed to become familiar with it according to the curricula approved by Farhangian University to use it in Teaching Practicum 1. Then they were expected to do the project defined in Teaching Practicum 1. In the control group, the only method was the data collection method. However, different methods were used in the experimental group. The desired analysis method in the control group was a coding technique which would confuse the students and deviate them from the goal. However, the partial coding method was not used in the experimental group in the same way as other qualitative studies. In the experimental group, the general interpretation and extraction of meanings are expected. In the control group, student-teachers move from theory towards action; however, the participants of the experimental group move from action towards theory. In the experimental group, the purpose is to turn student-teachers into knowledge makers and the creators of curricula through experience. However, the participants of the control group were expected to learn the theory first so that they can put it into action later. The training plan for the experimental group also emphasized the professional development of teachers and its dimensions. However, this was somehow neglected in the control group.

After implementing the project, the researcher-made tool was used to evaluate knowledge, competence and attitudes in both groups. The results were analyzed using the multivariate ANCOVA. The descriptive statistics (mean and standard deviation) and inferential statistics (multivariate ANCOVA) were used to analyze the research data. Given the presence of an independent variable at two levels and a dependent variable at three levels, MANCOVA was employed to analyze data. MANCOVA can control the impact of inconsistencies between groups and the impacts of pretest scores statistically. Therefore, it is more accurate than other tests (Palant, 2007; translated by Rezay, 2010).

RESULTS

The professional development of student-teachers is the main dependent variable including three other variables such as knowledge, competence and attitude. Knowledge and competence have some subtests, too. The following tables and diagrams show the mean and standard deviation in both groups on the pretest and posttest for primary and secondary variables.

Table2

According to Table 2, there is not a significant difference between the score means on the pretest in both groups. However, there are some differences between the two groups in the score means on the posttest. Therefore, it is necessary to use ANCOVA to evaluate the significance of means.

Table3

According to Table 3, the two groups are not so different in the pretests on knowledge, competence and attitude. However, they are different in the score means of posttests. Therefore, ANCOVA was used to evaluate the significance of differences. Each of the secondary variables (knowledge and competence) had subtests. The following tables and diagrams show the score means of students on these subtests.

Table 4

According to Table 4, the two groups are not so different in the pretests of subscales including content knowledge, pedagogical knowledge, technological knowledge, pedagogical content knowledge, and technological-pedagogical content knowledge. However, there were some differences between the score means of the two groups in subscales. Therefore, MANCOVA was used to evaluate the significance of differences.

Hypothesis Testing

Given the concurrent comparison of some dependent variables between the two groups, it is necessary to use MANCOVA. However, the implementation of this method requires some conditions and assumptions which should first be investigated in data. If all the conditions and assumptions are met, then the data are analyzed.

Compliance with the Assumptions of MANCOVA

1. *The Normality of Data*

The Smirnov-Kolmogorov test was used to make sure of the normality of data.

Table5:

According to Table 5, the values of K-S and significance level were (1.32, 0.06), (1.19, 0.12), (1.25, 0.09), (1.35, 0.06), (1.30, 0.07), (0.92, 0.36), (1, 0.26), (1.35, 0.06), (1.20, 0.13), (1.34, 0.06), (1.28, 0.07) and (1.25, 0.09) for content knowledge pretest, content knowledge posttest, pedagogical knowledge pretest, pedagogical knowledge posttest, technological knowledge pretest, technological knowledge posttest, pedagogical content knowledge pretest, pedagogical content knowledge posttest, technological-pedagogical content knowledge pretest, technological-pedagogical content knowledge posttest, attitude pretest, and attitude posttest, respectively. These values indicated the normality of data distribution. Therefore, the data normality condition is met.

2. *Consistency of Variances with Levene's Test*

The Levene's test was used to investigate the consistency of variances.

Table 6

According to Table 6, the significance level of dependent variables is P>0.05; therefore, the variances of dependent variables are not significantly different. Thus, the consistency condition of variances is confirmed.

1. *The Homogeneity of Interactive Impacts*

MANCOVA was used with the interaction between pretest and groups to investigate this assumption. Table 7 shows the results.

Table 7

The results of Table 6 indicate that the homogeneity condition of interactive impacts is complied with in the primary variables because the value of f is not at the significance level (P<0.05) in all interactions. Therefore, the homogeneity of interactive impacts is complied with.

Table 8

The results of Table 7 indicate that the homogeneity of interactive impacts is met in secondary variables because the value of f was not at the significance level (P<0.05); therefore, the homogeneity of interactive impacts is complied with. Given the assumptions required for the implementation of ANCOVA, the impact of narrative inquiry

curriculum on the professional development of student-teachers was generally investigated at first. Then the research sub-hypotheses were investigated separately.

The Main Hypothesis

The narrative inquiry curriculum has an impact on the professional development of student-teachers. The results of ANCOVA can be seen in Table 9.

According to Table 9, the value of Wilks Lambda (f=269.86, sig=0.0001 and squared eta=0.91) indicates that the group had a significant impact on dependent variables. Therefore, it can be stated that the narrative inquiry curriculum had an impact on the professional development of teachers.

Sub-Hypotheses:

1. The narrative inquiry curriculum has an impact on the professional knowledge of student-teachers.
   1-1.The narrative inquiry curriculum has an impact on the content knowledge of student-teachers.
   1-2. The narrative inquiry curriculum has an impact on the pedagogical knowledge of student-teachers.
   1-3.The narrative inquiry curriculum has an impact on the technological knowledge of student-teachers.
2. The narrative inquiry curriculum has an impact on the professional competence of student-teachers.
   2-1. The narrative inquiry curriculum has an impact on the pedagogical content knowledge of student-teachers.
   2-2. The narrative inquiry curriculum has an impact on the technological-pedagogical content knowledge of student-teachers.
3. The narrative inquiry curriculum has an impact on the professional attitudes of student-teachers.

The results of ANCOVA in the evaluation of sub-hypotheses can be seen in Table 10.

Table 10

Table 10 indicates the results of investigating the impacts of implementing the project on each subscale of the dependent variables.

Table 11

1. The narrative inquiry curriculum has an impact on the professional development of student-teachers.

According to Table 10 (f=352.69, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the professional knowledge of student-teachers.

1-1. The narrative inquiry curriculum has an impact on the content knowledge of student-teachers.

According to Table 11 (f=141.11, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the content knowledge of student-teachers.

1-2. The narrative inquiry curriculum has an impact on the pedagogical knowledge of student-teachers.

According to Table 11 (f=176.38, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the pedagogical knowledge of student-teachers.

1-3. The narrative inquiry curriculum has an impact on the technological knowledge of student-teachers.

According to Table 11 (f=171.16, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the technological knowledge of student-teachers.

2. The narrative inquiry curriculum has an impact on the professional competence of student-teachers.

According to Table 10 (f=448.51, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the professional competence of student-teachers.

2-1. The narrative inquiry curriculum has an impact on the pedagogical content knowledge of student-teachers.

According to Table 11 (f=300.33, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the pedagogical content knowledge of student-teachers.

2-2. The narrative inquiry curriculum has an impact on the technological content knowledge of student-teachers.

According to Table 11 (f=287.77, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the technological content knowledge of student-teachers.

3. The narrative inquiry curriculum has an impact on the professional attitudes of student-teachers.

According to Table 9 (f=180.48, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the professional attitudes of student-teachers.

Table 12

According to Table 11, the value of Wilks Lambda (f=124.03, sig=0.0001, and squared eta= 0.91) indicate that the group had a significant impact on dependent variables. It can be stated that the narrative inquiry curriculum had a positive impact on the professional knowledge, competence and attitude of student-teachers.

CONCLUSION

The aim of this study was to investigate the role of narrative inquiry curriculum in the professional development of student-teachers. The main research hypothesis was that the narrative inquiry curriculum has an impact on the professional development of teachers. Professional development included three secondary variables such as knowledge, competence and attitude. The analyses indicated that there was a significant difference between the two groups in knowledge, competence and attitude. This study does not have a background in Iran; however, foreign studies confirmed the findings.

The results of the research are consistent with those of studies conducted by Ai & Wan (2017), Byrne (2017), Taylor (2017), Kinsey & Moore (2015), Kelchtermans (2014), Lerseth (2013), Clandinin (2013), Kotsopoulos, Mueller and Buzza (2012), Smith (2012), Chan (2012), Kelchtermans (2010), Latta and Kim (2009), Ross and Chan (2008), Moss, Springer and Dehr (2008), Watson (2006), Soreide (2006), Fairbanks & LaGrone (2006), Yu (2005), McVee (2004), Schlein (2007), Rushton (2001), Conle (2000), Grumet (1988), and Clandinin (1989). All of these studies indicated that narrative inquiry helped the formation of teacher identity and the professional development of teachers in different dimensions.

To explain the research findings, it can generally be stated that involving student-teachers in the developmental activities based on narrative inquiry is an interesting task which changes the roles of student-teachers from information receivers to the creators of curricula and active knowledge makers. Through a research-centered approach, student-teachers can be involved in a type of learning which lets them think and ponder. Thinking and pondering result in perception and then action. Thinking and pondering on self-experiences and experiences of others help understand the subjects and extract meanings. Thinking is an appropriate way of solving problems. Another point is that learning is created in the narrative inquiry of society, and individuals can benefit from each other's experiences. Everyone can have a unique and valuable experience. Sharing experiences results in perception and understanding and makes the individual have another experiences. In narrative inquiry, learners are often involved in practical situations in which they can gain experiences. Involving in practical situations can lead to the better perception of theoretical concepts and establishes a relationship between action and theory. It even results in the production of theory. By getting involved in narrative inquiry, not only do students acquire knowledge and competence, but also their attitudes towards teaching, learning and learners will change for the better. The findings of this study confirm this discussion.

The narrative inquiry curriculum, which is based on the professional development, can create various conditions for student-teachers by concentrating on the goals of teacher professional development so that they can put the learned materials into action. One of the problems which unexperienced teachers face is that they cannot convey what they learned, a problem which is solved through learning based on narrative inquiry. The reason is that this method is able to fill in the gap between theory and action. In this method, student-teachers gain experience by getting involved in the action and learn the theoretical concepts better. They sometimes use theoretical concepts. Some other times, they observe and analyze others' experiences. Thinking and pondering on experiences would help them establish a relationship between theory and action. Moving form action towards theory helps student-teachers achieve the concepts and principles, a type of learning which can assist the sustainability of learning. The self-narrative culture can be institutionalized among student-teachers in this way, and their roles are changed from the active knowledge makers to lifelong learners. In fact, learning is based on experiences in this method, and they can learn through their or others' various experiences, thinking about experiences, and extracting meanings from experiences. Here, thoughtful learning enables students to discover new meanings on the path of professional development, know themselves and be the creators of curricula. This type of learning is very sustainable and lifelong. Therefore, this approach can be used to turn students into lifelong learners who are able to solve their problems anytime. These student-teachers will then become teachers who create their own curricula. This method can be used to train teachers who are able to achieve professional development and influence others' professional development now and anytime in the future.

REFERENCES

Abou, B. E. (2007). Levels of reflection in action research. an overview and an assessment tool. *Teaching & Teacher Education*, 23(1), 24-35.

Ai, B., & Wang, L. (2017). Re-entering my space: A narrative inquiry into teaching English as a foreign language in an imagined third space. *Teachers and Teaching*, 23(2), 227-240.

Bishop, R., Berryman, M., Cavanagh, T., & Teddy, L. (2009). Te Kotahitanga: addressing educational disparities facing Maori students in New Zealand. *Teaching and Teacher Education*, 25,734-742.

Bruner, J. (2002). *Making stories: Law, literature, life*. Cambridge, MA: Harvard University Press.

Byrne, G. (2017). Narrative inquiry and the problem of representation: giving voice making meaning. *International Journal of Research & Method in Education*, 40(1), 36-52.

Chan, E. Y. M. (2012). The transforming power of narrative in teacher education. *Australian Journal of Teacher Education*, 37(3), 9.

Clandinin, D. J. (1989). *Personal Practical Knowledge: A Study of Teacher's Classroom Images*. Toronto, Canada: Wiley.

Clandinin, J. (2013). *Engaging in narrative inquiry*. Walnut Creek, CA: Left Coast Press.

Clayton, C., & Kilbane, J. (2016). Learning in tandem: professional development for teachers and students as inquirers. *Professional Development in Education*, 42(3), 458-481.

Conle, C. (2000). Narrative inquiry: Research tool and medium for professional development. European *journal of teacher education*, 23(1), 49-63.

Connelly, F.M., & Clandinin, D.J. (1988). *Teachers a s curriculum planners: Narratives of experience*. New York: Teacher College Press.

Danesh Pazhouh, Z, Farzad, V. (2006), Evaluation of Competencies in Elementary School Teachers, *the Seasonal Journal of Educational Innovations*, 5 (18), 135-170.

Darling-Hammond, L. & Hammerness, K. (2005). The design of teacher education programs. In L. Darling-Hammond & J. Bransford (Eds), *Preparing teachers for a changing world* (pp. 390-441). San Francisco: Jossey-Bass.

Dewey, J. (1938). *Experience and education*. New York: Collier Books.

Fairbanks, C.M., and LaGrone, D. (2006). Learning together: Constructing knowledge in a teacher research group. *Teacher Education Quarterly*, 33(3), 7-25.

Grudnoff, L. (2011). Rethinking the practicum: Limitations and possibilities. *Asia Pacific Journal of Education*, 39(3), 223-234.

Grumet, M. R. (1988). *Bitter milk: Women and teaching*. Amherst: University of Massachusetts Press.

Huber, M.J, Murphy, S.M., & Clandinin, D.J. (2011*). Places of curriculum making: Narrative inquiries into children's lives in motion.* Advances in Research on Teaching, Vol. 14. United Kingdom: Emerald Group Publishing Limited.

Karimi, F. (2008). *Studying the Professional Competencies in Elementary School Teachers,* the Seasonal *Journal of Leadership and Educational Management, Islamic Azad University of Garmsar Branch*, 2 (4), 151-166.

Kelchtermans, G. (2014). Narrative-Biographical Pedagogies in Teacher Education. *In International Teacher Education: Promising Pedagogies* (Part A) .pp. 273-291.

Kelchtermans, G. (2014). Narrative-Biographical Pedagogies in Teacher Education. In *International Teacher Education: Promising Pedagogies* (Part A.pp. 273-291), Emerald Group Publishing Limited.

Kinsey, L. C., & Moore, T. E. (2015). Narrative Structure in Inquiry-Based Learning. *PRIMUS*, 25(3), 212-220.

Koehler‹ M.‹ & Mishra‹ P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*‹ 9(1)‹ 60-70.

Kotsopoulos,D., Mueller, J., and Buzza, D. (2012). Pre-service teacher research: an early acculturation into a research disposition*. Journal of Education for Teaching: International research and pedagogy*, 38(1), 21-36.

Kükner, J. M., & Orr, A. M. (2013). Narrative inquiry in the teacher education classroom: A review of Narrative Inquiries into Curriculum Making in Teacher Education. *Teachers and Teaching*, 22(1), 117-122.

Latta, M. M., & Kim, J. H. (2009). Narrative inquiry invites professional development: Educators claim the creative space of praxis. *The Journal of Educational Research*, 103(2), 137-148.

Le Fevre, D. M. (2011). Creating and facilitating a teacher education curriculum using preservice teachers' autobiographical stories. *Teaching and Teacher Education*, 27(4), 779-787.

Lerseth, K. A. (2013). *Identity development among pre-service teacher candidates.* A dissertation submitted to the graduate faculty in partial fulfillment of the requirements for the degree of doctor of philosophy. Iowa State University.

McNiff, J. (2007). My story is a living educational theory. In D. J. Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology* (pp. 308–329). Thousand Oaks, CA: Sage.

McVee, M. B. (2004). Narrative and the exploration of culture in teachers' discussions of lit- eracy, identity, self, and other. *Teaching and Teacher Education*, 20, 881-899.

Meier, D. R., & Henderson, B. (2007). *Learning from young children in the classroom: The art and science of teacher research*. New York, NY: Teachers College Press.

Moss, G., Springer, T., & Dehr, K. (2008). Guided reflection protocol as narrative inquiry and teacher professional development. *Reflective Practice*, 9(4), 497-508.

Ord, J. (2012). John Dewey and Experiential Learning: Developing the theory of youth work. *Youth & Policy*, (108), 55.

Palant, J. (2007), *The Analysis of Data on Behavioral Sciences in SPSS*, translated by Akbar Rezay, Tabriz: Forouzesh Publications

Parker, D. C., Pushor, D., & Kitchen, J. (2011). Narrative inquiry, curriculum making, and teacher education. *Narrative inquiries into curriculum-making in teacher education*, 3-18.

Phillion, J. (2005). Narrative in teacher education. In P. C. Miller (Ed.), *Narratives from the classroom: An introduction to teaching* (pp. 1-12). California: Sage.

Ross, V., & Chan, E. (2008). Multicultural education: Raj's story as a curricular conceptual lens of the particular. *Teaching and Teacher Education*, 24(7), 1705–1716.

Rushton, S. (2001). Cultural assimilation: A narrative case study of student-teaching in an inner-city school. *Teacher and Teacher Education*, 17,147–160.

Rushton, S. P. (2004). Using narrative inquiry to understand a student–teacher's practical knowledge while teaching in an inner-city school. *The Urban Review*, 36(1), 61-79.

Schlein, C. M. (2007). (Un) *learning to Teach: A Narrative Inquiry Into the Experiences of Canadian Teacher-returnees from Northeast Asia*. A thesis for the degree of Doctor of Philosophy Department of Curriculum, Teaching and Learning Ontario Institute for Studies in Education of the University of Toronto.

Smith, D. (2012). Supporting new teacher development using narrative-based professional learning. *Reflective Practice*, 13(1), 149-165.

Soreide, G.E. (2006). Narrative construction of teacher identity: positioning and negotiation. *Teachers and Teaching: Theory and Practice*. 12(5), 527-547.

Taylor, L. A. (2017). How teachers become teacher researchers: Narrative as a tool for teacher identity construction. *Teaching and Teacher Education*, 61, 16-25.

Tryggvason, M. T. (2009). Why is Finnish teacher education successful? Some goals Finnish teacher educators have for their teaching. *European Journal of Teacher Education*, 32(4), 369-382.

Watson, C. (2006). Narratives of practice and the construction of identity in teaching. *Teachers and Teaching: Theory and Practice*, 12(5), 509-526.

Wong, S. S. (2003). A narrative inquiry into teaching of in-service kindergarten teachers: Implications for re-conceptualizing early childhood teacher education in Hong Kong. *Early Child Development and Care*, 173(1), 73-81.

Xu, S. J. (2011). Narrative inquiry in curriculum of life on expanded and extended landscapes in transition. *On narrative inquiries into curriculum-making in teacher education*, 263-280.

NAVIGATING THE DARK SIDE OF MOTIVATION IN LEARNING ENGLISH: PROBLEMS AND SOLUTIONS

Hamed Barjesteh, PhD
Department of English Language and Literature
ha_bar77@yahoo.com

ABSTRACT
This study sought to uncover the demotivating factors in learning English language among Iranian university students. In so doing, from the population of students studying at Islamic Azad University master students of teaching English as a foreign language (TEFL) and Clinical psychology (CP) were selected based on a purposive sampling method. To uncover the most frequent demotivating factors in learning English, the subjects were asked to fill out a translated version of a demotivating questionnaire developed by Sakai and Kikuchi (2009). In addition, a semi-structured interview was conducted to uncover what factors can help students overcome their demotivation. The findings revealed a number of demotivating factors in learning English such as the size of classroom, teachers' behavior, inadequate use of digital apparatus, and the lack of communication activities to name a few. In addition, some suggestions were proposed to overcome the dark side of motivation in learning English. Knowing how students perceive the demotivating factors may help teachers, policy makers, and syllabus designers to take into account factors promoting the success and the rate of second language learning as general and learning English at university in particular.
Keywords: Clinical Psychology**,** Demotivating factor, EFL learners, Learning English, Motivation

INTRODUCTION

There is a general consensus among teachers, materials developers and language policy makers that motivation plays a pivotal role in learning a language. However, motivation as a construct encompasses a number of facets and disciplines to arrive at a logical understanding of its various components. Psycholinguistic, neurolingustic, sociolinguistic, and socioeducational theories have something to contribute for dealing with language learning motivation (LLM). LLM has gone through various stages over the past four decades. Experts in social psychology were the pioneers in developing models on motivation due to their awareness in cultural and social factors in language learning (Dornyei, 2003). This awareness leads postulating different models that highlight different cognitive, affective, and social factors in language learning. In general, three different perspectives emerged for LLM. From behavioristic perspective, it is a matter of anticipation of reward. A number of experts in the field such as Skinner, Pavlov, and Thorndike put this type of motivation as the cornerstone of their study. From the cognitive aspect, it relies on individual's decision, and the choice people make as to what experiences or goal they will approach or avoid. From the constructivist perspective each person is motivated differently which is derived from interactions with the peers (Dornyei, 2005, Ellis, 2008). From this perspective a number of influential theories emerged which aimed to explain the concept of motivation such as attribution theory (Weiner, 1992), self-efficacy theory (Bandura, 1993), self-worth theory (Covington, 1992), goal-setting theories (Locke & Latham, 1990), and self-determination theory (Deci & Ryan, 1985).

LITERATURE REVIEW

Probably, one of the prominent figures in the field of LLM is Gardner (1985) who proposed a socioeducational model. To him motivation is "combination of effort plus desire to achieve the goal of learning the language" (p.10). This model classifies motivation as *integrative and instrumental*. While the former refers to learners' tendency to communicate or assimilate with the member of the target language, the latter deals with a functional reason for language learning like getting a better job, receiving more income or passing a test (Gardner, 1985). Some experts in the field (Dörnyei 2009; Ushioda, 2011) have criticized the way experts classified motivation in the past. They proposed a process model of motivation comprised of integrative motivation, instrumental motivation, and the concept of motivation itself. The model came to known as L2 Motivational Self System (Dornyei, 2001). In Dornyei's process model (2001) motivation is treated as a dynamic aspect which changes over time. To him, motivation is classified as a learning process in three phases: initial motivation, maintaining and protecting motivation, and self-reflection.

Initial motivation is considered as getting learners excited about what they are about to learn. It happens prior to learn a language. Generating initial motivation is about increasing learners' expectancy of success and creating realistic learner beliefs about the language (Dörnyei, 2001). This comprised of a number of strategies such as promoting integrative motivation and raising students' awareness of the instrumental value of the language. The second phase occurs while the students are taking some action to learn the language. In this phase learners should cultivate their motivation and maintain the motivation. Maintaining a motivation includes a number of strategies such as using goal setting methods and providing students with regular experiences of success. The third phase is positive self-reflection. As the students complete some task on the way to their goal,

they should reflect positively about the experience and themselves. Fostering a positive self-reflection includes different strategies such as finishing class early when students work hard, and promoting effort attributions in students.

Demotivation concerns negative influences that reduce or cancel out motivation (Dörnyei 2001). It may relate to particular learning-related events, experiences, and factors in the social learning environment as well as experiences and personal engagement of learners outside the classroom (Dörnyei & Ushioda, 2011). These negative forces have a significant role in the L2 learning process and it has been suggested that de-motivation can have a greater influence on the learner's learning experience than the initial positive motivational basis. Moreover, it has been argued that failure to learn is often directly related to de-motivation (Dörnyei & Ushioda, 2011).

Many teachers are looking for the best ways to motivate their students. Christophel and Gorham (1995) found that the strongest influence on motivation was not the presence of motivators in the classroom, but the absence of de-motivators. Demotivation concerns external forces that reduce motivation. It does not result from (1) powerful distractions of a more attractive option, (2) a gradual loss of interest, nor (3) an internal process without any external trigger (Dornyei, 2001). This last qualification concedes de-motivation as a product of cognitive processes, but specifies that such processes must start as a reaction to external stimuli, or the phenomenal world. Among these researchers, Dörnyei, in particular, has done extensive research on practical aspects of motivation such as the question of how teachers can help to improve learner motivation in classrooms (Dörnyei, 2001). A number of experts in the field (Dornyei, 2001b, Falout & Maruyama, 2004; Zhang ,2007) consider demotivation as the dark side of motivation. Dörnyei (2001) has defined demotivation as "specific *external* [italics added] forces that reduce or diminish the motivational basis of a behavioral intention or an ongoing action" (p. 143).

Different studies demonstrate that those learners who have higher motivation are more successful and effective in their learning (Ely, 1986; Gardner, 2000). Motivation can be regarded differently by people coming from different contexts. Second language (L2) professional literature stipulates that students who spend more time on assignment seem to have more learning efficacy (Sternberg & Williams, 2002). However, demotivate students cannot accomplish learning even with the appropriate teaching method (Dörnyei, 2009). Research on L2 motivation has been currently mushroomed, but few have examined the demotivating factors in language learning. It is treated as the dark side of motivation which decrease learners' tendency to learn a language. In fact, it is detrimental to students LLM. In fact, learners become de-motivated due to many reasons such as unpleasant and difficulty in learning content and materials of foreign language and shortage of facilities in the learning process. Thus, a teacher will be overburden to maximize students LLM and minimize demotivating factors in language learning. Knowing how students perceive the demotivation factors can pave the ground for better language learning.

Molaee, Dortaj, Sadipour (2016) highlight the effectiveness of an instructional-motivational plan based on self- conscious and self report on personal de-motivating factors which can motivate EFL learners. A similar study was conducted by Hosseini and Jafari (2014) to uncover major demotivating factors in learning English at high school. The result of factor analysis revealed that insufficient school facilities, inappropriate teaching materials and contents, and the dearth of intrinsic motivation were the most demotivating factors. Similarly, Molavi and Biria (2013) investigate the probable difference between the achievement of 50 motivated and de-motivated Iranian seminary students in EFL learning. The finding revealed students with high score in Gardner's attitude/ motivated test battery had higher score in the proficiency test as well due to their motivational factors. Likewise, Jafari (2013) attested that language learning is facilitated when learners are highly motivated. He suggested that language teachers should learn how to motivate their students to increase their chance of learning the language. Another study was conducted by Alavinia and Sehat (2012) to investigate Iranian students' de-motivating factors. Their findings demonstrate there is no significant difference among the classes except for the factors concerned with the teachers' behavior and learning experience. They maintain that both internal and external factors might demotivate learners. Meshkat and Hassani (2012) concluded that Iranian students considered factors like lack of school facilities, overemphasis on grammar, lengthy passages for reading comprehension, and expectancy to use correct grammar in the classroom as the main obstacle for learning language. In addition, they conclude that male and female students are different as far as their demotivating factors in language learning are concerned. In a similar vein, Akbarzadeh and Sharififar (2011) in an attempt investigated demotivating factors among EFL learners and found classroom-related factors as the highest de-motivating ones among three factors of teachers-related factors, learners-related factors, and classroom-related factors, particularly for less motivated learners.

Examining L2 professional literature confirms the necessity of conducting a research on uncovering the main demotivating factors for learning English. Despite a plethora of study examining the demotivating factor in language learning, few studies conducted a comparative analysis to navigate the dark side of motivation between English vs. non-English major students.

THIS STUDY

The present study attempted to uncover and compare the demotivating factors in learning English between TEFL and CP students. Many students need to study English language in Iran due to the fact that it is a mandatory course. In addition, There has been a growing interest in the topic since L2 learning is the area of education that is perhaps most commonly characterized by failure to learn (Dörnyei & Ushioda, 2011). Despite its importance, de-motivation has remained rather an under-researched area and only a few studies have been conducted on the topic. Therefore, more research is needed to identify the sources of de-motivation in order to deal with them effectively. Knowing the dark side of motivation can promote better language learning. This study was conducted to tap the main demotivating factors among TEFL and CP students at the master level. To undertake the study, this paper addressed the following research questions:

RQ1: What are the demotivational factors in learning English among TEFL students?

RQ2: What are the factors causing demotivation in learning English among CP students?

RQ3: Is there any significant difference between TEFL and CP students on demotivation factors in learning English?

Q4: What factors can help university students overcome the dark side of motivation in learning a language?

The third research question is quantitative in nature. To answer this question, a null-hypothesis was proposed. The other research questions are qualitative in nature. Detail of data analysis is provided in this paper.

METHOD

PARTICIPANTS

A purposive sampling method was conducted for screening the participants and two groups of TEFL (N=20) and CP (N=20) students comprised the subject pool of the study. The selection of participants was informed by consent from the respondents, emphasizing the voluntary nature of participation addressing concerns regarding privacy, anonymity and confidentiality. Of 53 students, 40 were interested to participate in the study. They were all Persian native speakers studying at higher education level, M.A., in Islamic Azad University in Amol. The TEFL students had at least 4 years' experience in language learning at B.A. and the CP students had experience in learning English at high school. They were aged between 23 and 32years and 17 were male and 13 female

INSTRUMENTATION

A translated version of demotivating questionnaire developed by Sakai & Kikuchi (2009) was used to measure the demotivating factors among English and non-English students. The questionnaire comprised 44 items in a Likert-scale format and the potential demotivating factors were already identified by an exploratory factor analysis. To probe the reliability of the questionnaire for the context of this study. It was administered among 60 mater students and the reliability checked through Cronbach Apha method turned out to be .78.

FOCUSED GROUP INTERVIEW

In addition, a focused group interview was conducted to uncover learners' perception about factors that help them cope with de-motivation. Focus group interview is a qualitative technique for data collection. Anderson (1990) posits that focus group is "a group comprised of individuals with certain characteristics who focus discussions on a given issue or topic" (p. 241). Denscombe (2007) believe that this type of interview includes a number between six and nine participants who are invited by a researcher to uncover attitudes and perceptions, feelings and ideas about a topic. A focus group interview provides a setting for the relatively homogeneous group to reflect on the questions asked by the interviewer. Five open ended questions were used to explore motivating factors among the participants. The items were adapted from an extensive literature review (Chambers, 1999; Dorneyei & Ushioda, 2011; Gregersen, 2003; Kikuchi, 2009). It was used to consider participants` experiences in coping with de-motivation. In addition, it aimed to compare motivation factors among TEFL and CP students. Interviewees were also free to ask any questions when appropriate.

DATA COLLECTION PROCEDURE

The primary purpose of this study was to probe the de-motivating factors in learning English among Iranian university students at M.A. level in Islamic Azad University. A purposive sampling procedure was employed two groups of university students, TEFL and CP, as the subject of the present study. They were all informed about the main objectives of the study and how their contribution can help the researcher to uncover the dark side of motivation in learning English among university students in Iran. They were asked to fill out the translated version of a demotivating questionnaire developed by Sakai and Kikuchi (2009). In addition, a focused group interview was conducted to triangulate the data collection with a hope to uncover what factors can help university students cope with the demotivating factor. The interview was conducted among selected samples who had time enough to participate. Students in both groups invited voluntarily to a class in due time for the

interview. Each interview lasted about 10 minutes, and all interviews were digitally recorded and transcribed verbatim for further data analysis.

RESULTS

Demotivating factors of EFL learners

This study aimed to uncover demotivating factors in the EFL context and compare the corresponding factors between students in English language major and non-English majors. The first research question revealed the demotivating factors of learning English among Iranian EFL learners. To uncover the factors, the demotivation questionnaire was administered among the participants. The respondents were asked to checkmark each item from number 1 (Never) to number 5(Always). Therefore, the highest score for an individual item could be 220 and the lowest score could be 44. The aim was to find out which factors were the most and least demotivating factors. The results of the survey are presented in Figure 1 for the EFL students.

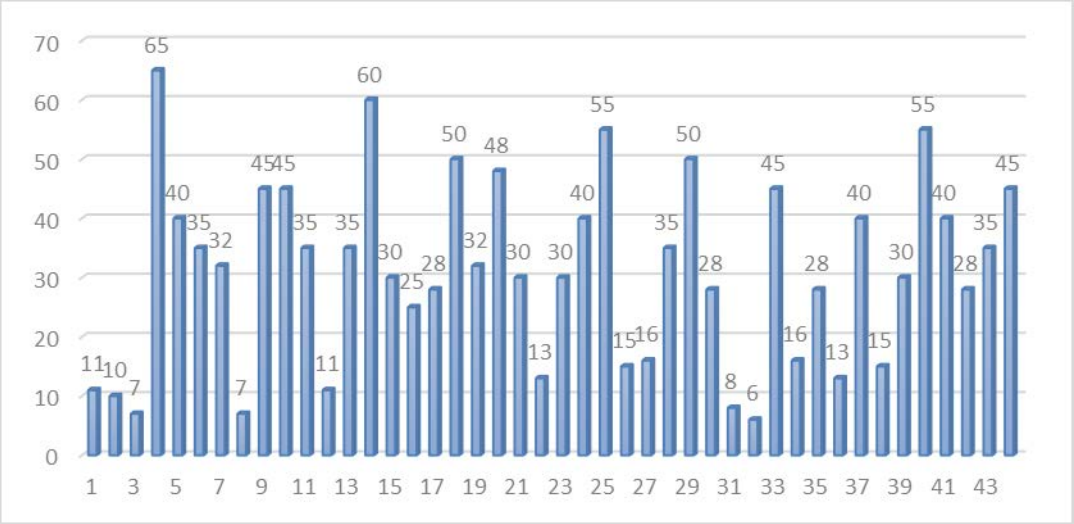


Figure 1. Frequency of the demotivating factors of learning English among EFL learners

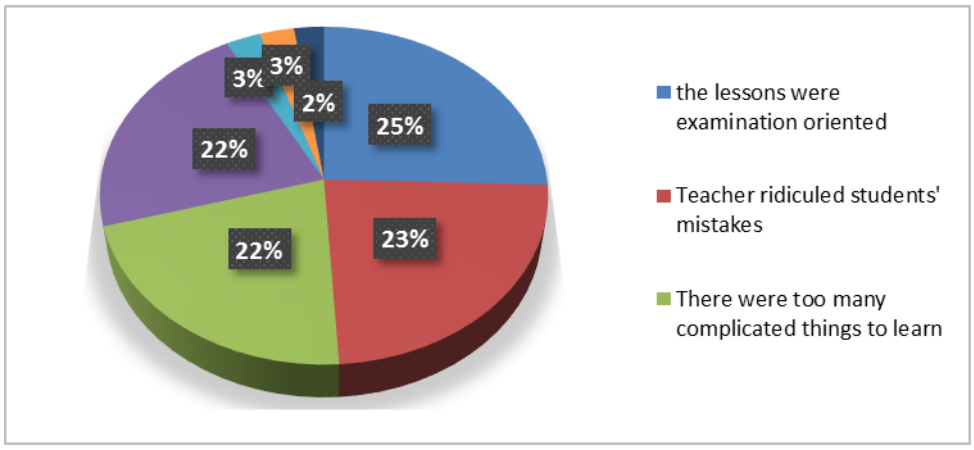
As it can be seen in Graph 1, factors 4, 14, 25, 40, and 29 were among the most frequently selected demotivating factors by Iranian EFL learners. The first rank among the items goes to item 4 (Most of the lessons were examination oriented). Factor 4 is related to psychometric value for a test. Of all participants, 65% considered exam orientation of the educational system of Iran as the demotivating factors among EFL learners. The second item among the most demotivating factor is item14 (Teacher ridiculed students' mistakes). This shows that teachers should build rapport among EFL learner.

The other three demotivating factors among the frequent ones are item 25 (There were too many complicated things to learn) item 40 (I lost confidence because I felt studying the target language became difficult) as well as item 29 (I did bad on test despite my effort).

Items 3, 8, and 32 are the least demotivating factors among Iranian EFL learners. Item 3 (Class lacks communicative activities in the target language) is the least frequently demotivating factors among Iranian EFL learners. Factor 8 (Sentences used in lessons were difficult to interpret) is the second in the list of the least frequent ones. Iranian EFL learners reported that they had no problem in interpreting sentences used in their lesson. Item 32 (My friends made fun of me when I made mistakes in class) is the last factor among the least frequent ones. Iranian EFL learners reported that their friends do not make fun of them in case of making a mistake.

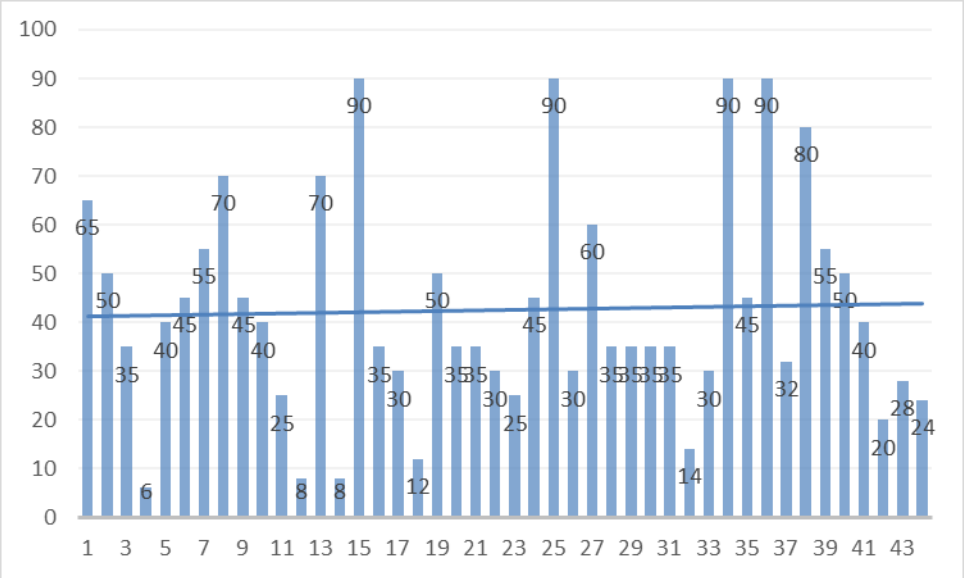
To demonstrate the demotivating factors among all the 44 items, the following pie chart used to show the proportions of a whole.

Figure 2. The most and least motivating factors among EFL learners



Demotivating factors of EFL learners

To answer the second research question aiming to uncover the de-motivational factors of learners in non-English majors, students of clinical psychology, the same procedure was conducted for data analysis. Similarly, they were asked to score each item from number 1 (Never) to number 7(Always). The results of survey are illustrated in the graph 3 below.



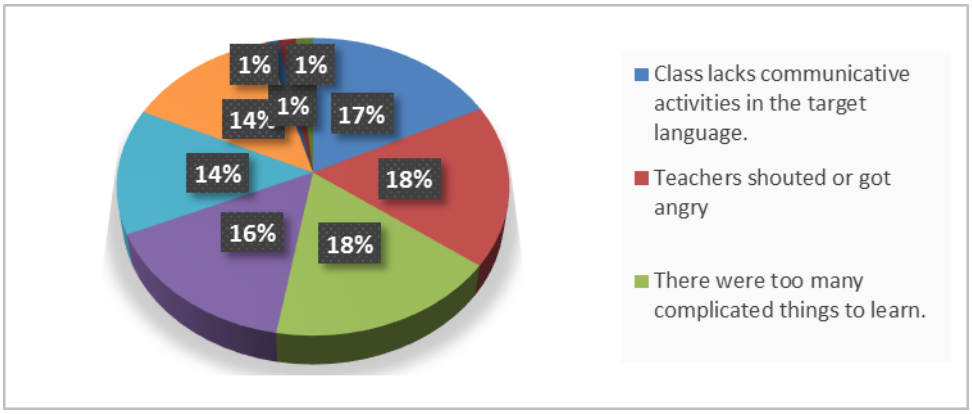
Graph 3. Frequency of the demotivating factors of learning English among Psychology students

As it can be seen in Graph 3, factors 15, 25, 34,36, 38, 8 and 13 were the most frequent demotivating factors among Iranian clinical psychology students in learning English. The first rank among the most frequently demotivating factors goes equally to items 15, 25, 34, and 36 (Teachers shouted or got angry, There were too many complicated things to learn, I disliked my classmates, and Computer equipment was rarely used). The next item among the most demotivating factor is item 38 (The size of my language classes was not appropriate). They complained large number of students as a demotivating factors for language learning. The last demotivating factors are items 8 and 13 (Sentences used in lessons were difficult to interpret, Teachers lectured too much). They reported that they had problem in interpreting sentences in lessons. Similarly, they considered teacher oriented centered as a demotivating factor. The other three demotivating factors among the frequent ones are item 1(The pace of the lessons was not appropriate) and item 27(Grammar was not useful in daily life) ae well as item 7 (I could not learn what I wanted to learn).

Items 4, 12, and 14 are the least demotivating factors among CP students. Item 4 (Most of the lessons were examination oriented) is the least frequent demotivating factors among Iranian EFL learners. Factor 12

(Teacher's pronunciation of the target language was poor) is the second in the list of the least frequent ones. Psychology students were satisfied with their teachers' pronunciation. Item 14 (Teacher ridiculed students' mistakes) is the last factor among the least frequent ones.

To graphically represent demotivating factors, the following pie chart was used to show the proportions of a whole among clinical psychology students in learning English.



Graph 4. The most and least demotivating factors among Psychology students

Comparing EFL and CP students' demotivating factors

To provide a better schematic representation of EFL learners and psychology students' demotivating factors, table 1 below compares the demotivating factors of both groups.

Table 1. Comparative analysis of demotivating factors in two groups

No.	Factors For Psychology Learners	F	P	Factors for EFL learners	F	P
1	Class lacks communicative activities in the target language.	90	40.90%	The lessons were examination oriented.	65	29.54%
2	Teachers shouted or got angry.	90	40.90%	Teacher ridiculed students' mistakes.	60	27.2%
3	There were too many complicated things to learn.	90	40.90%	There were too many complicated things to learn.	55	25%
4	I disliked my classmates	80	36.37%	I lost confidence because I felt studying the target language became difficult.	55	25%
5	Computer equipment was rarely used	70	31.81%	Class lacks communicative activities in the target language.	7	3.18%
6	The size of my language classes was not appropriate	70	31.81%	Sentences used in lessons were difficult to interpret.	7	3.18%
7	Most of the lessons were examination oriented	6	2.72%	My friends made fun of me when I made mistakes in class.	6	2.72%
8	Teacher's pronunciation of the target language was poor	8	3.63%	---	--	--
9	Teacher ridiculed students' mistakes	8	3.63%	----	---	--

F= frequency P= Percentage

To probe the third research null-hypothesis stating that there is not any difference between learners in English language major and non-English majors based on demotivation factors, a Mann-Whitney U test was conducted. Table 2 below shows the mean rank of both groups.

Table 2. Descriptive statistics of the mean Ranks for EFL learners and psychology students

	Groups	N	Mean Rank	Sum of Ranks
Score	EFL Learners	20	16.32	326.50
	Psychology students	20	24.68	493.50
	Total	40		

As indicated in the table 1, there is a difference between the mean rank of EFL learners and psychology students with the mean rank of (16.32 and 24.68). In order to examine if this difference is significant, a Mann-Whitney U test was conducted. Table 3 below illustrates the result.

Table3. Mann-Whitney U test for the both group

	Score
Mann-Whitney U	116.500
Wilcoxon W	326.500
Z	-2.280
Asymp. Sig. (2-tailed)	.023
Exact Sig. [2*(1-tailed Sig.)]	.023[a]

a. Not corrected for ties. b. Grouping Variable: Groups

Table 3 reveals that there is a significant difference between both group (sig=.023). This result reveals that there is a difference in learning English between English vs. non-English major students as far as their demotivating factors in learning the language are concerned.

Factors overcoming demotivation

To answer the last research question stating that what factors can help students overcome their demotivation in learning English, a focused group interview was conducted among both TEFL and CP students. Their interview was digitally recorded. After the data collection, the data were transcribed verbatim. Next, the theme analysis was conducted. Students' motivation can be fostered by both internal and external factors. All students commonly believe that teachers have crucial role in motivating and demotivating the students. They maintain that teachers should be skillful enough to motivate students to pair works and project works. They maintained that an adept teacher can define short term projects to constantly assess the learners while they do not feel that they are being evaluated. This will motivate students to have an active role and maximize their self efficacy. In addition, this will cause a teacher build rapport. Most of the students believe that a teacher should provide supportive atmosphere in the classroom for an optimal motivation (Alderman, 2004) and a collaborative atmosphere (Gregersen, 2003). Almost majority of CP students mention that making fun of a wrong answer could not be tolerated. Thus teacher and learning relationship can pave the ground for a better learning environment. They advocate indict feedback instead of direct one. Following Lightbown and Spada (2012), this would discourage them. Most of the students postulate that a teacher maximizes eye contact with all the students and avoid praising students for the minor achievement. They also maintain that a teacher should provide a link between the classroom content and the real world situation. They recommend that a teacher use realia, audio-visual materials and L1 in the classroom when there is a gap of communication**.**

Although the quantitative data suggest some demotivating factors among the groups, CP students seem to demotivate in learning English. The interviewees revealed some factors which are interrelated to demotivation. They also explained some factors which can help concerning demotivation in learning English. They suggest students' self-confidence is deeply interrelated especially with tests. The correlation between reduced self-confidence and tests is strong for both groups. What follows provide excepts from the interview:

A: *I really miss my confidence during examination.*

E: *I don't1 like tests. I don't have enough confidence to cope with tests.*

C: *I don`t like English because I can`t get good marks in English, so I lose my self confidence in English.*

CP students also reported that learning grammar was a demotivating factor. The evidence suggests that learning grammar among CP students cause frustration and confusion. The following presents excepts of students' perspective regarding grammar.

J: *I don't like English because I can't understand the grammar.*

F: *I don't like English because the books focus on grammar. I like to learn how to speak. I don`t like the grammar.*

For those who have low language proficiency, learning how to learn was another hurdle for learning English.

K: *I like English but I don`t know how to study.*

L: *I'm demotivate in English because I don`t know how to memorize the words.*

In addition, teachers' behavior seems to be another demotivating factor. Lack of building rapport demotivates students in learning.

H: *Our teachers were too angry. They shouted when I made mistakes in English.*

M: *One of my teacher ridiculed student` mistakes in the classroom. I couldn`t ask any questions or answer the questions in the classrooms.*

DISCUSSION

This study aimed at uncovering demotivating factors in learning English among TEFL and CP students at the master level. It also attempted to determine factors that can help university students overcome the dark side of motivation in learning English language. The results revealed that the number of students in a classroom, teachers' professional behavior, lack of incorporating ICT, lack of CLT activities, and emphasize examination in the policy of education are among the most cited were among the most cited demotivating factors by TEFL and CP students in dealing with learning English language.

The analysis of data revealed that most of the students were demotivated by grammar. Students were forced to memorize grammar and this force demotivates them. As they explained in the interview, in terms of grammar-based teaching, students quoted that teachers over-emphasized grammar, lessons were examination-oriented, and there were lack of opportunities to communicate in English language in the classroom. In addition, students were expected to memorize rules of grammar, and a large number of English words. This finding is in line with the study conducted by Sakai and Kikuchi (2009) who found grammar-based teaching as a demotivating factor for junior high school students in Japan. Furthermore, the study by Lehikoinen and Leinonen (2010) also confirmed grammar-based teaching as the prime cause of demotivation among upper secondary students in Japan.

Classroom environment is another demotivating factors. Students reported reasons such as inadequate classroom facilities, lack of computer equipment, audio and video materials, and lack of Internet demotivated them to learn English language. Besides, students disliked their classmates and overcrowded classrooms. These findings support the study by Dornyei (1998) which revealed that lack of facilities in the classroom demotivated secondary school students in Budapest. Furthermore, Kikuchi's (2009) study also found that classroom environment also demotivated junior high school students to learn a second language in Japan. The study by Hirvonen (2010) also confirmed classroom environment as a source of demotivation among immigrant students in Finland. University classes should be facilitated with video-projectors and language laboratories to enhance the motivation level among second language learners (Jomairi, 2011). As most interviewees quoted in the interview, they are demotivated by crowded classrooms. English language is a skill that the learners are required to do various drills and activities to attain proficiency and over-crowded classrooms do not provide students appropriate opportunities. Therefore, they demotivate in English language learning (Chambers, 1999).

Receiving low score was another demotivating factor among the participants. This finding echoes Jomairi (2011) who also identified low marks as a demotivating source for Iranian undergraduate students majoring in English. The findings also support Sakai and Kikuchi's (2009) study who claim that low test scores were one of the most influential demotivating factors among Japanese high school students. It was found that low test scores had an impact on students' motivation to learn English. Therefore, teachers need to ensure that students are motivated in order that they are able to score higher in tests which may help them boost their confidence.

Course books and teaching materials were reported as an influential demotivating factor and students attributed the cause of demotivation to readings and assignments assigned by the teachers, and use of uninteresting topics in English lessons. So, the reasons which demotivate students are too many textbooks and readings, uninteresting topics, and irrelevant teaching materials. The finding of the present study reveals that students are fed up with boring lessons, lengthy English lessons, stressful lecture and uninteresting textbooks. The findings also support a study by Hirvonen (2010) who revealed that ineffective teaching materials demotivate immigrant students in Finland. Besides, the study by Sakai and Kikuchi (2009) revealed that characteristics of course contents and teaching materials discouraged Japanese secondary school students to learn English language effectively. In another study by Muhonen (2004), it was found that course contents and teaching materials were the source of demotivation for Finish ninth-graders. In the Pakistani context, uninteresting teaching materials caused boredom and decreased students' motivation in learning English. Kikuchi (2009) also concluded that teaching materials were more demotivating for Japanese high school students than teachers' behavior. Amemori (2012) stated that course contents and teaching materials were one of the key factors which demotivate undergraduate students. Richards and Renandya (2002) also assert that well-designed teaching materials not only address the need of L2 learners, but they also keep students motivated to improve their interest in L2 learning.

Lack of self-confidence and interest appeared as a demotivating factor with students attributing the cause of their demotivation to the compulsory nature of English language, and loss of interest in English. The findings revealed reasons such as fear of making mistakes and shyness which demotivate students to learn English. The findings support the study by Dornyei (1998) who suggests that the compulsory nature of English language pressurized students in. Although lack of self-confidence is an internal problem, students can be motivated by being provided a more conducive environment which is stress-free where they can be encouraged to practice the English language regardless of the fear of making mistakes.

Teachers' behavior emerged as another demotivating. The Misbehavior of teachers reduces students' motivation to learn English language. A number of such misbehaviors reported by the students were mocking at students' mistake and shouting. Furthermore, the qualitative findings of the present study claim that teachers who intimidate and under-estimate students have also been cited as a reason for students' demotivation. The finding echoes Dornyei (1994) who postulate that teachers play an important role to encourage students to participate in language learning activities.

A glance over the main demotivating factors in learning English reveals that most cited problems by the university students are the external factors that are out of the control of the students. A number of factors above such as large number of students, lack of CLT activities, insufficient use of ICT, and teachers' professional behavior in the classroom are among the most common obstacles which are external to the language learner. In addition, the students have no chance in making change for the policy of language learning. Almost two third of the participants criticized the system of evaluation. The critique lies in the fact that their evaluation was based on the preplanned regulation where there was little room for assessment. In other word, the should follow the product oriented policy dictated in the educational setting.

CONCLUSION

This study was an attempt to uncover the demotivating factors in learning English among English vs. non-English major students and to seek the probable differences between the two groups. The findings reveal that TEFL and CP students are different in their demotivating factors in learning English. The findings indicate that the most demotivating factors among TEFL students were the policy of exam orientation, teacher behavior, feeling difficulty of the course content, and lack of communicative activity in the classroom. Similarly, the CP students reported the following factors as the most demotivating factor for learning English: lack of communicative activities, teachers' misbehavior, and lack of building rapport in the classroom. Thus, the findings of the present study suggest language policy makers train qualified teachers to be well equipped and knowledgeable so as to maximize learning opportunity, provide an optimal motivation, build rapport in the classroom, and foster collaborative atmosphere in the classrooms.

REFERENCE

Akbarzadeh, M., & Sharififar, M. (2011). An analysis of de-motivators in English classes for Iranian university students. *The Iranian EFL Journal, 7*(2), 28-40.

Alderman, M. K. (2004). *Motivation for Achievement*. Mahwah NJ: Lawrence Erlbaum.

Anderson, G. (1990). *Fundamentals of Educational Research*. London: The Falmer Press.

Alavinia, P., & Sehat, R. (2012). A probe in to the main de-motivating factors among Iranian EFL learners. *Canadian Center of Science and Education, 15*(6), 35.doi.org/10. 5539/ elt.v5n6p9.

Amemori, M. (2012). *Demotivation to learn English among university students in Finland*. (Unpublished master thesis) university of Jyväskylä department of languages.

Chambers, G. N. (1999). *Motivating language learners*. Clevedon: Multilingual Matters

Christophel, D., & Gorham, J. (1995). A test-retest analysis of student motivation, teacher immediacy and perceived sources of motivation and demotivation in college classes. *Communication Education, 44*(4) 292-306.doi: 10.1080/03634529509379020

Denscombe, M. (2007). *The good research guide for small-scale social research projects* (3rd ed.). New York: McGraw-Hill

Dornyei, Z. (1998). Motivation in second and foreign language learning. *Language Teaching, 31*, 117 – 135.

Dornyei, Z. (2001). Motivation and motivating in the foreign language classroom. *Modern language Journal, 73*(3)273-284.

Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 9-42). Bristol, UK: Multilingual Matters.

Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation*. Harlow: Pearson Education.

Ely, C. M. (1986). Language learning motivation: A descriptive and causal analysis. *Modern Language Journal, 70*(1), 28-35.

Gardner, R. C. (2000). Correlation, causation, motivation, and second language acquisition. *Canadian Psychology/ /Psychologie canadienne, 41*(1), 10-24.

Gardner, R. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London: Edward Arnold.

Gregersen, T. S. (2003). To Err Is Human: A Reminder to Teachers of Language-Anxious Students. *Foreign Language Annals*,*36*, 1, 25-32.

Falout, J., & Maruyama, M. (2004). A comparative study of proficiency and learner demotivation. Language Teacher, 28(8), 3:9. Accessed at http://jalt:publications.org/tlt/articles/447:comparative:study:proficiency

Hirvonen, M. (2010). *Demotivation in learning English among immigrant pupils in the ninth grade of comprehensive school* (Unpublished Master Thesis). University of Jyväskylä, Department of Languages.

Jomairi, S. (2011). *Demotivating factors in second language learning at State, Azad and Payam-Nour Universities*. International Conference on Languages, Literature and Linguistics. IACSIT Press, Singapore.

Kikuchi, K. (2009). Listening to out learners' voices: What demotivate Japanese high school students? *Language Teaching Research, 13*, 453- 471.

Lightbown, P., & Spada, N. (2012). *How Languages Are Learned* (4th ed.). Oxford: Oxford University Press

Lehikoinen, E., & P. Leinonen (2010). *Motivation and demotivation to study English at three different school levels in Finland*. (Unpublished Thesis) University of Jyvaskyla, Department of Languages.

Meshkat, M., & Hassani, M. (2012). Demotivating factors in learning English: the case of Iran. *Procedia-Social and Behavioral Sciences, 31*, 745-749.

Molavi, A., & Biria, R. (2013). EFL learning among motivated and demotivated Iranian seminary. *Latin American Journal of Content and Language Integrated Learning, 6*(1), 55-66.

Molaeea, Z., Dortaj, F., & Sadipour, E. (2016). Unmotivated Motivating: Toward Motivating L2 Learning, Based on Demotivating Factors. *Journal of social and Behavior Science*,*217*, 9-15.

Muhonen, J. (2004). *Second language demotivation: Factors that discourage pupil from learning the English language* (Unpublished pro Graduate Thesis). University of Jyvaskyla.

Richards, J., & Renandya, W. (2002). *Methodology in Language Teaching: An Anthology of Current Practice.* Cambridge: Cambridge University press.

Sakai, H., & Kikuchi, K. (2009). An analysis of demotivators in the EFL classroom system. *An International Journal of Educational Technologies and Applied linguistics, 37*, 57-69. doi.orgg/101016/i.system2008.09.005.

Sternberg, R. J., & Williams, W. M. (2002). *Educational psychology*. Boston, MA: Allyn & Bacon.

Ushioda, E. (2011). Language learning motivation, self and identity: Current theoretical perspectives. *Computer Assisted Language Learning*, *24*(3), 199-210.

NEGLECTING IMPLICATIONS OF PERSONS WITH SPECIAL NEEDS IN NIGERIA:ROLE OF TEACHERS

Rev. (Sr) Juliana Rotkangmwa Bodang, (Ph. D)
Department of special Education and Rehabilitation Sciences, Faculty of Education, University of Jos NIGERIA
michogun63@gmail.com

Emmanuel Agbo Owobi, Ph. D
Department of Special Education and Rehabilitation Sciences, University of Jos, Nigeria.

ABSTRACT
The paper attempts to examine the implication of neglecting persons with special needs in Nigeria. The paper identified the different areas in which persons with special needs are been neglected. The paper further posits that total integration is what persons with special needs require to take their rightful place in the society. The paper concludes that full integration of persons with special needs can only succeed where government and others are prepared to provide functional, free and qualitative education, enabling laws, employment opportunities, quality personnel, adequate infrastructure and relevant instructional materials; among others.
Keywords: Implication, Neglecting, Persons, With, Special, Needs & Integration

INTRODUCTION

Persons with special needs have been discriminated against over the years. Attitude towards them was mainly that of hostile neglect, inhuman treatment and rejection. This attitude was largely the result of ignorance, misconception and misinformation. Persons with special need's major problem in the world is how to make them become an integral part of the society in which they live.

"Who are the persons with special needs? The term "persons with special needs" is generally used to describe the significant departure from the normal trends in human development and to imply the associated needs of an individual that make special education imperative for a person if he/ she must live useful life in the society (Mba, 1991, Onwuchekwa, 1993, and Ozoji, 1993). Persons with special needs are therefore children whose special needs as a result of significant departure from normal trend in human development are such that they need special education provisions/ services to live a useful life in the society. Exceptionality has two strata – the handicapped and the gifted/talented. The focus of this paper will be on the handicapped.

When government got involved in Special Education in the early 1970s with laudable policy statements and programmes, people heaved a sigh of relief. Although government has made some efforts but a lot more needed to be done. Experience showed that there has never been a positive march between theory and practice in terms of implementation. Rather, it appears that the realization of the policy statements and programmes is observed more in rhetoric at public for and with official documents.

Given the fact that the persons with special needs are on the increase per day and that they have the right to participate in the life of the society, earn a proper wage and live a full life as others, it becomes necessary and sensible that relevant thoughts and actions be put in place to fully integrate them into the society in which they live. The task of this paper is to trace the historical perspective of persons with special needs and examine the consequences of their neglect. This is followed by a discussion of total integration of the persons with special needs, the way forward and finally, the conclusion.

Historical Perspective

Down through the ages, the birth of the handicapped child has usually been frowned at in most African societies. The frown cannot be divorced from the culturally inherited misconceptions and attitudes toward the handicapped resulting, fear in devaluation, and discrimination against them. In line with this, Mendow (1992) reveal that from the earliest history, handicapped persons have been viewed with a mixture of fear, scorn, awe, misunderstanding and pity. Ansahayomoab (1996) confirmed similar attitude towards handicapped persons among the Akan people of Ghana. Buttressing the above, Adima, Abang, Awanbor, Ladipo and Ogbue (1988) observed that from the days of Aristotle, prejudice against the disabled was almost universal and it affected their

social, economic, educational, mental and psychological well being. Nigeria is not an exception in this contextual negativism.

The Nigerian attitude towards the handicapped children in the past was greatly influenced by superstitious beliefs and stigmatization. In some cases, handicapping conditions were perceived as punishment from aggrieved vengeful gods for wrong doings by individuals, their parents or significant others. Umedium (1983) indicated that before formal education in Nigeria, handicapped children were more or less regarded as accursed and freak people. As a result, parents see the birth of a handicapped child as a bad luck. The negative and discriminatory attitude shown towards the handicapped made parents in the past to either kill their handicapped children or allow them to live and care for temporarily but later pushed out secretly into the streets to cater for themselves. To survive, many of them resorted to begging, therefore littering the streets with countless number of beggars.

However, the negative attitude towards the handicapped epitomized in underrating, neglect and rejection is gradually changing. Adima et al (1988), observed that until recently in Nigeria, the fate of the handicapped persons lacked definition, if not non-existent. The insignificant change of attitude is succinctly absorbed into the society, yet their condition o living is still very inadequate. The consequences of not providing for the handicapped children are enormous (Oghojafor, 1995; Okeke, 1998).

Implication of Neglecting Persons with special needs in Nigeria

In a civilized society, every human being irrespective of disability, has the right to live and contribute to the development of his society. According to World Health Organization's estimate, one out o every ten persons in the world may be disabled at any one time (WHO Report, 1976). The United Nations Organization also estimates disabled persons as constituting at least ten per cent of the total population of every country. Nigeria with a population this number is substantial, overwhelming and therefore warrants a practical demonstration of relevant thoughts and actions by government and others.

Ten million is the population of some African countries. In fact, some African countries have populations that are less than 10 million. Perceiving these enormous number of people as weak, incapable and perpetually dependent on others will not only amount to denying these persons their rights but will also amount to slowing down the wheel of development. The neglect of these number of individuals has obvious consequences. Apart from consulting a barrier to the quest for scientific and technological advancement, the individuals can constitute nuisance to the society.

For instance, today on our highways and streets, ne cannot but notice numerous 'fit' and 'unfit' children and adults begging for alms. Nigerians are comfortable with dropping coin in their palms r plates without realizing that we are encouraging the dependency syndrome. Any reflecting person who sees these persons with special needs begging for alms in our streets, corners and highways cannot but conclude that government has not done its job. We must remember that a nation is judged, not by how the affluent few live, but by how assisted to become functional and contributing members of the society. In this regard, the Chinese adage finds a privileged position here – it is better to teach a child how to fish instead of giving him fish. In order to lift the persons with special needs from that level of dependency and inadequacy, there is need for total integration. Our people should also be made understand that "disability is not inability". This can be done through sensitization programmes such as we are witnessing today.

Total Integration of Persons with special needs

Any meaningful discourse on total integration must, of necessity its, consider social and economic dimensions. Integration, according to Husen and Postlethwaite (1995), represents a more challenging and demanding policy of changing conditions and expectations at all levels of society as well as regular school classes in ways that will make full participation possible for people with disabilities. Continuing, they add the overall aim of integration is to maximize the social interactions between the disabled and the non-disabled while at the same time improving academic standards and the self concept of the disabled pupils. Although government, in the National

Policy on Education (revised 2012), has identified integration as "the most realistic form of special education since persons with special needs are expected to live in the society". Unfortunately, integration in Nigeria is used as mere placement. Such placement does not in line with the above, Lewis (1993) affirms that it is not enough to place all reform, not pupil placement. He further adds that integration as a matter of school of valuing and celebrating individuals not judging all against one standard.

Total integration should aim at achieving complete acceptance and a loving understanding of the persons with special needs without discrimination. In other words, total integration should aim at accepting, recognizing and according the persons with special needs their rightful place and status in the society.

Social Integration

Man is a social animal and thus has the unique characteristics that propel him to long to associate with others. Man also lives in a society and must therefore relate with people around him. Segregating persons with special needs by way of putting them in separate institutions is temporal because by and large, they will eventually relate with the larger society. This may have been one of the rationales for integrating persons with special needs into regular school classes. Social integration is viewed as the practice whereby persons with special needs and their non-exceptional counterparts interact during non-academic time (Ntukidem, 1998). Persons with special needs, like their non-exceptional counterparts, have legitimate, social, emotional and physical needs. One of the major justifications for educating persons with special needs in regular schools, many believe, is to further their social and emotional development.

Eleri (1993) however laments that persons with special needs are at a disadvantage because of certain barriers which prevent them from fully satisfying their needs. These barriers he identified as social customs, values, attitudes and expectations. Others include the human parts of the physical environment. In training an individual to acquire technical skills for instance, the acquisition of non-technical skills are never taught. They are acquired through interaction and experience. When our customs and beliefs segregate and isolate the exceptional child from mixing and interacting with peers and significant others, how can he acquire the non-technical skills? Although the customs and beliefs are gradually changing, the change is such at a snail pace that it is hardly observable. We must do something positive to socially integrate the persons with special needs.

Economic Integration

Work occupies a central place in the life of an individual. It enables an individual o be economically self-supporting and assures him of a rightful place at home and in the community. Work is one of the prime realities of life, a very important focus on human motivation, even for formal education. Work has a therapeutic quality, a stabilizing force in life in that it opens up goals for achievements, attainments, independence and self esteem. Work has a social value in that much of the recognition a man receives, even in his home/community, is accounted for by what he does (Oghojafor, 1995; Okeke, 1998). Buttressing the above, Togonu- Bickerteth, (1996) adds that work provides us with money with which to meet our personal needs and fulfil societal obligation. He further adds that work also enables us to contribute our quota to the socio-economic activities of our community and the nation at large, therefore affirming our sense of ride. Hence, when disability becomes a handicap to employment, it creates problems for the individual, the family and the society.

Government also, in the National Policy on Education (revised 2012), sub-section 7 had said that government will provide suitable and appropriate employment opportunities for the exceptional and disabled people. In spite of the fact that the above is a policy statements, successful placement of the job-ready rehabilitees into suitable jobs have been a major problem for special educators and other social workers. Thus, during the 8th General Meeting o the National Council for Rehabilitation of the Disabled held in Enugu in 1983, it was agreed that the International Year of Disabled Persons (IYDP) National Committee should include "Employment of Disabled" in their national seminar. The IYDP national committee had recommended that the Federal Ministries of Economic Planning, Employment Labour and productivity, and Social Development, Youth and Sports should jointly sponsor before June 1983, a national workshop on the Employment and Aftercare of Disabled persons,

including the problems of beggars (Mba, 1989; Alade and Abosi, 1990). In 1986, the workshop on "Employment of the Disabled" was held. The workshop sponsored by the Federal Ministries of Social Development, Youth and Sports; National Planning; Education; and Employment, Labour and Productivity; Nigeria Employers Consultation Association and the Nigeria Labour Congress, discussed extensively the issue of employment for the disabled. Two types of employment were highlighted and categorized. These are (a) paid employment and (b) self-employment (individual or through co-operatives).

Other recommendations include the giving of special grants by government to employers of labour to defray the cost of extra facilities that may be necessary to make exceptional person functional in his working place and the waving of import duty on equipment meant for enhancing effective functioning of the disabled (Alade, Abosi, 1990). In fact, a president of this country once directed that 2% of job opportunities be reserved for qualified exceptional persons. These recommendations were hardly implemented.

Research studies on job placements and opportunities for the disabled, however, have revealed that when the persons with special needs are considered for jobs, they are often given menial jobs – as cleaners, attendants, gateman and other unskilled positions. Most employers are unwilling to employ them and when they are forced to do so, they do not offer them the same conditions like the normal workers (Babalola, 1997). But it has been observed that when exceptional persons are given job opportunities, they are found to be dedicated, polite, honest, punctual and hardworking (Aderugboye, 1999).

A look at various policy statements and programmes may make one conclude that government is doing quite a lot for the persons with special needs. A closer observation will however reveal to discerning minds that the value the society places on the handicap has constituted a conflict between socially desired intentions and the implementation of those intentions. This is why Sommers (1994), a former president of the Nigeria Labour Congress (NLC), speaking about unemployment problems facing the disabled, observed that "in a situation of mass unemployment such as we are facing now, one may wonder why we should bother ourselves about the employment of the disabled when the nation is moving towards full unemployment for the "able-bodied". This statement of Chiroma epitomizes the societal attitude towards the exceptional people. This statement of Chiroma against the employment of the persons with special needs prior to the full employment of their able-bodied counterparts is patiently antithetical to the view of civilized world. For instance, the United Nations General Assembly (1975) declared that " No society can deny a person the right to participate in the life of the community earn a proper wage and live a full life as others just because he is disabled in some way".

The attitude of Nigerians towards the persons with special needs has made many of the laudable policy statements to remain pious statements of intent without practical effect. What can be done? What is the way forward?

The Way Forward

To fully integrate the persons with special needs, the following should be done by government and well-meaning Nigerians:

i) Provision of free, functional and qualitative education;
ii) Provision of enabling laws;
iii) Involving groups/associations in advocacy movement;
iv) Creating awareness aimed at changing public attitude towards persons with special needs;
v) Provision of qualified personnel, required infrastructure and instructional materials;
vi) Provision of employment for the job-ready persons with special needs.
i) Provision of Free, Functional and Qualitative Education

Education is an indispensable tool in the integration of an individual into his society. Education enlightens, liberating and prepares one for useful living. The place of education in liberating an individual and maintaining world peace and understanding has been articulated by the President of the Rotary Club International, Kinross. According to him (1998); **t**he strongest weapon that the world can wield against poverty and hunger, and the

most powerful tool for world peace is education. There can never be a sustainable progress to lift people from poverty unless we teach them to read and write and do basic arithmetic. In this era of the global market place, no one can even get a toe-hold on the lowest rung of economic ladder unless they have these functional skills. Still stressing the importance of education in the scheme of things, Hegarty (1990) observed that all children have the right to be educated and that one of the tragedies of our time is that very many children are not educated because they have no opportunities to go to school and that those with disabilities who, ironically have greatest need of education are the least likely to receive it. Let me quickly add here that one of the purposes and objectives of Special Education, as contained in section 55(a) of the National Policy on Education (revised 2012), is to "give concrete meaning to the idea of equalizing educational opportunities for all children; their mental, physical, emotional disabilities notwithstanding". This is well said and worthy of commendation. But the reality of the matter is that not much of this policy statements has been practicalised. This explains why in this day and age when our country is going technological, our rehabilitation centres still prepare inmates for broom and basket making. Do we blame employers of labour if they do not employ them? Do we need a prophet to tell us that most of our rehabilitation centres are substandard and need upgrading? Adequate preparation of persons with special needs for a living must take cognisance of the changes around us. The advancement in science and technology that has rocked all spheres of human endeavour, for instance, should be reflected in the programmes or the preparation of persons with special needs (Okeke 1998).

Proper preparation of persons with special needs include ensuring that the teacher is psychologically prepared and professionally equipped to meet the needs of these children. The physical environment should not only be spacious but also barrier – free. There should be relevant teaching materials and equipment. The curriculum needs to be modified according to the needs and interests of persons with special needs. To achieve all these, there is need for a comprehensive vocational training as well as free and qualitative education at all levels for them.

ii) **Enabling Laws**

There is need for special educators, parents and professionals in related disciplines to pressurize government to enact both federal and state laws that will facilitate the total integration of persons with special needs. Such law/ legislation should be patterned along the famous " Education for All Handicapped Children Act of 1975", otherwise known as Public Law 94 – 142 of the United States of America. The Law stipulates a number of things to be adhered to by both the persons with special needs have available to them, within the periods specified, a free appropriate public education which emphasizes special education and related services designed to meet their unique needs" (P.L. 94 – 142, 1975, Sec. 3. C). to further ensure that persons with special needs are protected from the discriminatory practices in public education, there was the need to entrench, in this public law, the following "bill of rights for the exceptional learners". They include the right to a free appropriate public education, the right to an individual education programme, the right to due process of law and the right to the less restrictive environment. Nigeria can do the same to record the same rewarding and success here that the enactment of law should be followed with allocation of adequate economic and human resources for a meaningful implementation.

iii) **Involving Group/Associations In Advocacy Movement**

Responsible groups/associations should assist to pressurize government to enact laws that will enhance the full integration o persons with special needs. Such groups include various professions that render services for victims of exceptionalities like the Nigerian Medical Association; the Nigerian Nursing Association; the Nigerian Union of Teachers and the Nigerian Association of Physiotherapists. Other professional associations or organizations such as the Nigerian Bar Associations the Nigerian Chambers of Commerce and Industry, the Nigerian Union of Journalists and the National Council of Women's Societies should also lead the campaign for civil and human rights for exceptional Nigerians. Humanitarian and philanthropic organizations like the Rotary club, the Lions and Lioness Clubs, the Soroptomist International Club, religious groups and public spirited individuals should assist in the movements for equal rights for all, exceptionality notwithstanding. The exceptional persons too should organize themselves into groups or associations and not only cry out for their needs but also claim their rights. Parents of persons with special needs should form associations to assist

themselves and their children. They should identify with their children having known that exceptionality is not something to be ashamed of (Oghojafor 1995, Okeke 1998).

iv) **Creating Awareness Aimed at Changing Public Attitude Towards Persons with special needs**

There is need to change public attitudes towards what constitutes proper treatment for persons with special needs. This can be achieved through the use of handbooks, pamphlets, bills and posters, radio and television programmes in form of drama and demonstrations. Professionals can be assisted financially, not only in upgrading their services and assisting in educating the lay people about the care of the persons with special needs, but also in organizing conferences, workshops and seminars.

v) **Provision of Qualified Personnel, Required Infrastructure and Instructional Materials**

Quite often, noble ideas conceived by government fail to achieve designed objectives due to inefficient implementation, caused by the ineptitude of the personnel chosen to run the project. Consequently, in order to achieve optimum result, it is imperative that qualified personnel be charged to passionately plan and execute programmes meant for persons with special needs.

We cannot be talking about total integration of the persons with special needs without talking adequate care of infrastructure and instructional materials. Architectural barrier should be taken care of and relevant instructional materials provided. With regard to the above, let us congratulate the former Military Governor of Niger State, Colonel Lawal Gwadabe; who made Minna, the Niger State Capital, the most accessible city or capital in the whole federation. The Five Star Shiroro Hotel at Minna, was also made completely accessible to all, exceptionality notwithstanding. This should be the attitude of all and sundry in erecting public buildings.

vi) **Provision of Employment for the Job-Ready Persons with special needs**

The education provided for the persons with special needs is incomplete until the job-ready persons with special needs are given employment. Getting Nigerians to employ persons with special needs requires enacting enabling laws. Employing these children is not enough. There should be supportive services aimed at providing them with the needed assistance and beefing up their knowledge where necessary.

CONCLUSION

Finally, the burden of changing our society rests squarely on all of us. And we do know that “disability is not inability”. Consequent upon this, the persons with special needs, if lifted from the quagmire of disability through free functional, qualitative education and gainful employment, can achieve higher state of existence. When equipped with the above information and opportunity and we fail to accept to improve the lots of persons with special needs, we cannot go home with clear conscience. We should all strive to ensure total integration of all children irrespective of exceptionalities.

REFERENCES

Abosi, C.O. and Alade, S. (1990). “A Review of Researches on Employment Opportunities for the Deaf in Nigeria.” *Journal of Special Education and Rehabilitation I (I), 81 – 88.*

Adima, Abang T Awanbor, D. Ladipo, S.O. and Ogbue. E, {1988}. Fundamentals of Special Education, Ibadan Heinemann Educational Books { Nig} Limited.

Aderugboye, J.K. (1999). “Government Assistance to the Blind in Nigeria”. Unpublished Manuscript.

Ansahayomoah, K { 1996}. " The Adjective Role of the Extended Family: Implication for Guidance and Counselling for the Handicapped"" T*he Nigerian Journal of Guidance Counselling 2 {1}, 41- 48.*

Babalola, A.O. (1997). “A Survey of Employment Opportunities for the Handicapped”. Unpublished Manuscript.

Eleri, M {1993}. "'Barriers to the Disabled Persons in Nigeria" in ED Ozoji and I. A. Nwazuoke {eds} Education of the Exceptional Child in the 21st Century: Tasks and Strategies Jos: NCDC Publication.

Hegarty, T. {1990} Education of the Young people with Disabilities: Principles and Practice World Conference on Education, Thailand: UNESCO.

Husen, T and Postlethwaite, T. N. {1995}. The International Encyclopaedia of Education 6 3556-3560.

Kinross, G.W {1998} "" Educate, Educate , Educate" in The Rotarian 172, 40- 43.

Lewis, R B {1995} " Learning Disabilities and Reading International Recommendation from Current Research"". Exceptional Children, 50, 230 -240.
Mba, P.O. (1989). “Job Opportunities and Placement Problems of the Handicapped” in G.A. Ademokoya and T. Ajobiewe (eds.) 30 Selected Papers of Dr. P.O. Mba. Ibadan: Codat Publications.
Mba, P.O. (1991). “ Vocational Rehabilitation As a Fundamental Requirement of Development of the Deaf in Nigeria” in G.A. Ademokoya and T. Ajobiewe (eds.) 30 Selected Papers of Dr. O.O. Mba. Ibadan: Codat Publications.
Mendow, L.P. {1992}. Deafness and Child Development. London: Edward Arnold Limited .Publishers
National Policy on Education (2012). Federal Government Press, Lagos.
Ntukidem, E. P { 1998} "" Social Integration of Exceptional Persons in Nigeria" In The Exceptional Child 2 {2}, 54-55.
Oghojafor, A.L. (1995). “Vocational Education and Rehabilitation of “Disabled” Nigerians: Past and Present.” In O.C. Okobia and Nwaogu, P.O.(eds.)
Okeke, B.A {1988A}. "Lack of Legislation: A Hindrance in the Advancement of Vocational Education and Rehabilitation In Nigeria "Journal Of Counselling Psychology 4 {1} 1-6.
Okeke, B.A {1998A}. "The status of disability rehabilitation Centres in Enugu State - Nigeria: An Appraisal". African Journal of Special Education 3(2) 67 - 74.
Onwuchekwa, J M {1993 } {ed} A Comprehensive Textbook on Special Education. Ibadan: Agbo Areo Publishers.
Ozoji, E.D. (1993). *Psychology of attitudes towards the disabled*: The Nigerian perspective. Jos: Deka Publications.
Togonu-Bikersteth, F. (1996*). "Impact of a community based vocational rehabilitation programme on self and others' perception of disabled persons"*. Life Psychologies: An International Journal. Vol.4, No. 1, pp 1-25.
Togonu -Biockersteth, {1996}. "Impact of Community - Based Rehabilitation Program by Persons with Disabilities : A training Manual for Front-Line Social Workers in Africa " Unpublished Manuscript.
World Health Organisation Report A 29/INF Doc// 1 p[resented at the @9th World Health Assembly in 1976
Sommers, V.A. (1994). *The influence of parental attitudes and social environment on the personality development of the adolescence blind*. New York: American Foundation for the blind.

PROBLEMS AND SOLUTION PROPOSALS IN "SCHOOL EXPERIENCE AND TEACHING PRACTICE" COURSES IN DEPARTMENT OF MATHEMATICS EDUCATION

Cansu Bakırcı
Research Assistant, Gazi University, Gazi Faculty of Education
cansubkrc@gmail.com

Sevil Büyükalan Filiz
Asst.Prof.Dr, Gazi University, Gazi Faculty of Education
sevilb@gazi.edu.tr

ABSTRACT
The aim of this study is to determine the problems experienced by the pre-service mathematics teachers,course lecturers and practice teachersduring the School Experience and Teaching Practice courses and solutions that are suggested for these problems. This study is a qualitative study.The study group of the research consists of 40 students who are senior students in the spring semester of 2016-2017 academic year in Gazi University, Faculty of Education and 14 course lecturers and 8 practice teachers who took part in the School Experience and Teaching Practice courses.Astructured interview form was used as data collection tool. Study results demonstrated that most frequently mentioned problems are thatpractice teachersdo not allow pre-service teachers to teach four lesson hours that pre-service teachers are obliged to, the insufficiency of school administrators and coordinators' knowledge of the new implementation system, lack of communication, cooperation and coordination between the university and the school and insufficient evaluation.

INTRODUCTıON
The qualifications that teachers need to have have been a subject that has often been addressed in recent years. A teacher is a person who constantly interacts with the student, applies the educational program, manages the teaching, and evaluates both the student and the teacher. The qualities of the teacher also influence the quality of these processes.In increasing the quality of education, the effects of qualifications gained in pre-service training for pre-service teachers are great (Rıza ve Hamurcu, 2000). The process of becoming a teacher is a process in which theory and practice are intertwined and requires the development of teacher candidates in many aspects.

One of the factors directly affecting the quality of teacher education is the experience of pre-service teachers' teaching experience as their practice in schools. Experience at school is closely related to the development of professional skills of pre-service teachers and their ability to comprehend the subtleties of the teaching profession (Bektaş ve Ayvaz, 2012).Teacher candidates go through a process in which they observes practice teachers' teaching practices and skills as a preparatory phase for teaching practice in the course of school experience, while in teaching practice course they go through the process of activities carried out in the practice school and classroom teaching practices in order to acquire and develop teaching skills (YÖK, 1998).In the course of teaching practice, pre-service teachers are able to apply theoretical knowledge they learn in the courses they take in faculties.However, this course offers the possibility of participating in the school life in a comprehensive manner for one year (Çiçek ve İnce, 2005).In the Faculty-Family Cooperation Manual published by YÖK (1998), the duties, responsibilities and reciprocal expectations of the pre-service teachers, course lecturers andpractice teachers are clearly stated.

Various changes have been made in the direction of teaching practice in the education and training institutions affiliated to the Ministry of National Education in order to increase the function and effectiveness of the "teaching practice" course in cooperation with the Higher Education Council, Teacher Training National Committee, Ministry of National Education and General Directorate of Teacher Training and Development.In addition to the fact that every pre-service teachers should be registered in MEBBIS (Ministry of National Education Information Systems) and given the continuity and common notes given by the guidance teacher and the teaching staff, it is also stated that these grades will be taken as basis in addition to the KPSS (Public Personnel Selection Exam) and the interview scores. While this is a positive development for criticism that KPSS (Public Personnel Selection Exam) is not an examination to measure the quality of teachers, evaluation studies for School Experience and Teaching Practice courses become more important.

It has been revealed that there are many problems faced in the lessons of School Experience and Teaching Practice during the interviews and studies conducted with the pre-service teachers and other interested persons.

In the light of the information mentioned above, in this study, it will be examined that pre-service teachers who are educated in Gazi University, Elementary School Mathematics program, course lecturers and practice teachers' problems they have experienced in application courses and the solutions for these problems.
In order to solve this problem, the following sub-problems will be searched:

1. In the coursesof school experience and teaching practice;
    1.1. What are the problems faced by pre-service teachers?
    1.2. What are the proposed solutions forpre-service teachers to these problems?
2. In the coursesof school experience and teaching practice;
    2.1. What are the problems faced by course lecturers?
    2.2. What are the proposed solutions forcourse lecturersto these problems?
3. In the coursesof school experience and teaching practice;
    3.1. What are the problems faced bypracticeteachers?
    3.2. What are the proposed solutions forpractice teachersto these problems?

METHOD

Research Method

In this section, information about research model, universe, sample and data collection tool used in research and data analysis will be given.This research was conducted in order to evaluate the opinions of pre-service mathematics teachers, teacher trainess and intructors in the Gazi University Faculty of Education, Primary Mathematics Teaching Program on problems experienced in school experience and teaching practices and suggestions for solutions to these problems.The research data were collected using qualitative research method.Qualitative research can be defined as a research in which qualitative information gathering methods such as observation, interview and document analysis are used and a qualitative process is followed to reveal perceptions and events in a natural and realistic way (Yıldırım, 1999). Qualitative research takes the social phenomenon to the forefront in researching and understanding the natural environment.

In the qualitative dimension of the study, interview technique consisting of open ended questions was used.An interview as a research technique is a form of verbal and controlled communication between a researcher and a person who is the subject of the research (Cohen and Manion, 1994).The researcher aims to systematically reveal the thoughts and feelings of the target person by guiding the questions that he or she has already prepared about the topic being investigated or by directing the aimed questions at that point.

Besides, a document review was carried out since the diaries that pre-service teacheres kept on during their practice experiences, carried a document about the teaching process (Koç ve Yıldız, 2012).

Participants

In this study, teacher candidates who read in Primary Education Mathematics Teacher Training Department of a university in Ankara, course lecturers who gave School Experience and Teaching Practice courses and practice teachers in the application schools participated in this study in the academic year of 2016-2017.The study was conducted with purposive sampling.It is formed from these subgroups in order to illustrate, describe and compare the characteristics of certain subgroups interested in the sample (Büyüköztürk, 2012). Namely, participants were chosen as purposeful, eager and easily accessible.A total of 58 participants, including 10 course lecturers, 40 pre-service mathematics teachers and 8 teachers from the schools where teacher experience practices were carried out, participated in the research.

Data Collection Tool

Research data were collected using structured interview form.The pre-service teachers and practice teachers were asked seven basic questions andcourse lecturers were asked six questions including open-ended questions about problems and suggestions for solutions.In order to ensure the internal validity of the interview questions, two experts in this area were consulted.Open-ended questions provide a flexible approach to the topic from which the researcher wishes to investigate, while preventing important variables related to the topic from being overlooked (Yıldırım & Şimşek, 2005).

Pre-service teachers have prepared reflective diaries about the activities they have performed each week in internship schools.During the fourteen-week implementation period, the pre-service teachers observed the administrative and social affairs of the school, the classroom management and questioning activities of the applicationteacher and the application of the course plan prepared by one of the pre-service teachers. Teacher candidates are also asked to mention the problems they encounter throughout the school days in these diaries and the solutions they have found to these problems.

Data Analysis

Research data were analyzed by descriptive and content analysis.By means of content analysis, the data are tried to be defined, the data which are similar to each other and which are found to be related to each other are interpreted by combining them in the context of certain concepts and themes (Karataş, 2015). Content analysis of the data was performed in stages. In the first stage, the views of pre-service teachers,course lecturers and practice teachers derived from their answers were coded, in the second stage the categories were determined, in the third stage the codes and themes were organized and finally the findings were interpreted.

Also, after the application process was completed, 336 reports in 24 pre-service teachers' reports that they gave to the course lecturers of the courses were analyzed by content analysis.After the coding process, the data from the views and daily reports in dairies of pre-service teachers were matched and combined.

FINDINGS

In the research, the questions directed to the course lecturers working in the field of mathematics education, pre-service teachers and thepracticeteachers in the school experience and teaching practices were examined under two categories.These are (1) the problems faced by pre-service teachers, course lecturers andpractice teachers in school experience and teaching practice, and (2) suggestions for solution of these problems.

Findings and interpretations are presented one after the other based on participant groups. The opinions of the participants in the survey were tabulated according to their importance, direct citations were made and the evidence presented and interpreted.

Views of Pre-Service Teachers

In the research, firstly, pre-service teachers' problems in teaching practice and school experience courses and suggestions for solutions developed for these problems have been examined.Table 1 presents the problems that experienced by the pre-service teachers and Table 2 presents the solution proposals for the problems.

Table 1. Pre-service teachers' problems in teaching practice and school experience

	Responses	*n*	*f*
Problems related to the lecturer	Not to express clearly the rules that are related to the application to them	40	5
	Lack of communication between university and school	40	5
	Not to follow courses in a certain order	40	3
	Strict attitude exhibitions in the evaluation of the course	40	2
Problems related to the practice teachers	Not to act warmly to pre-service teachers The practice teachers' talk about private life	40	6
	Reluctant to fill out the course evaluation form	40	6
	Not to allow pre-service teachers to lecture for a specified time	40	6
	Not to act warmly to pre-service teachers	40	6
	Not to allow pre-service teachers to use other computer-assisted mathematics programs other than EBA	40	3
	Not to allow pre-service teachers to use external samples of the textbook given	40	3
	Conflicts arising from the differences in the practice and viewpoint of the practice teachers from the pre-service teachers	40	2
Problems related to the School Coordinator / school administrators	School administrators and coordinators have insufficient knowledge of the new system	40	6
	Lack of communication with pre-service teachers	40	4
	Not to allow teacher candidates to use the teacher's room in the school	40	4
	Roughing and ordering pre-service teachers	40	3
	Providing pre-service teachers with jobs outside their responsibilities	40	3
	Not being taught by the official procedures determined by MEB during the internship	40	3
Problems related applicaiton schools	The idea that the experiences that pre-service teachers gain will not work because the schools will not be as beautiful as the school they are practicing	40	7
	The crowd of classes	40	5
	Inadequate library and resource rooms	40	4

	Limited course materials	40	4
	Missing experiences due to the fact that teacher candidates lecture to only the girl class or only male class at the Imam Hatip School	40	4
	Limitation of possibilities while lecturing the lesson that originated from lack of internet	40	3
	Classes are not appropriate for editing constructor-oriented activities	40	3
	Not being able to use the smart board	40	2
	Transportation Problem	40	2
Problems faced in evaluating the course	Finding it difficult, time consuming and unnecessary to write reports because of seniority and the KPSS process	40	15
	The evaluation form is inadequate for the course evaluation	40	7
	Absence of attendence rights	40	6
Problems of teaching	In the majority of the theoretical courses in the university and difficulty in applying theoretical knowledge due to the lack of practical courses	40	21
	Difficulty of attending students' level	40	19
	Decrease in efficiency due to KPSS pressure	40	11
	Feeling insufficient in lecturing	40	10
	do not see pre-service teachers as teachers	40	10
	For the students to meet in the spring; there is not enough time to get to know each other, to provide classroom management and to change attitudes towards mathematics	40	8
	Having difficulty in practice because information learned in college can be applied on "ideal" conditionsStudents	40	5
	Teaching approaches learned in college ignores the individual differences of the students in school	40	5
Problems related to the group mates	Having a disagreement about choosing an application teacher	40	4
Possible problems that will arise when the teaching practice course score is effective in teaching selection	The idea that guide teachers will not be objective when making an assessment	40	27
	Different scores of different universities, different standards and attention spots prevent an objective and objective rating	40	8
	The mistakes caused by lack of experience due to the application in the last class affecting the score	40	7
Other problems	Having difficulty in arranging the internship day because the application school lessons coincided with the university courses	40	6

According to Table 1., When table 1 is examined, it is seen that pre-service teachers have problems in school experience and teaching practice lessons.

In general, pre-service teachers have stated that the course lecturers do not express clearly the rules regarding the application course, do not regularly follow the course, have a strict attitude in the evaluation of the course and can not communicate between the school and the university. For example, while a student gave an opinion of *"The course teacher did not share the rules for the application with us at the beginning of the semester"*,another student pointed out the problem by saying "*We can not say that we have learned something in practice about this lesson for three years until we go into teaching practice. However, the course lecturers, without taking this into consideration, are showing a strict attitude*".

Pre-service teachers stated that they had conflicts with the guidance teacher due to different practice and viewpoints and that the practice teachers were reluctant to allow pre-service teachers to lecture for a specified time and did not allow the teacher candidates to use their own exercises and computer aided programs. They

also expressed that some of the practice teachers talked about their private lives.For example, while a student gave an opinion of *"The guidance teacher thinks that sometimes I am too elaborate or slow because I do not have the same educational understanding as him. I focus on acquisition, while the guidance teacher focuses only on the progress of the subjects"*,another student pointed out the problem by saying *" Our guide teacher always talked to us about his son".*

Pre-service teachers stated that the school coordinator and the school administrators gave them jobs beyond their responsibilities, rather than the official procedures determined by the Ministry of Education, which they must earn during the internship.It is stated that school administrators are rude to teacher candidates, use command mode and do not allow pre-service teachers to use their room.For example, while a student gave an opinion of *"I see it as a problem that we have to win during the internship and not be given to us official acts determined by MEB. Because I will meet all of this for the first time I am a teacher and it will take me a while to learn what I should do if I'm inexperienced."*, another student pointed out the problem by saying "*The attitude of the schoolmaster and assistant principal is not nice to approach the teacher candidates. At the same time, I think they do not care enough with us, and they feel like I have to do everything they say*".

Some pre-service teachers expressed that they had transportation problems related to the practice school, that there were no sufficient internet connectivitiy, library and materials in their practice schools and that they weren't able to use the smart board while lecturing. Some pre-service teachers have stated that the classes are crowded and therefore not suitable for organizing activities for constructivist approach.For example, while a student gave an opinion of *"I do not think the apprentice school is adequate as hardware. I think the library and the resource rooms are also inadequate"*, another student pointed out the problem by saying "*Although the smart board is available, we can not use it because there is no smart board pen*".

The other most frequently mentioned problem is that pre-service teachers felt insufficient in lecturing and had difficulty of attending students' level even though they took lessons related to teaching profession and pedagogical content knowledge.

According to them, the reason for this is that the university has the majority of theoretical courses and the lack of practical courses. They claim that practical courses that they took in university cause difficulty in practice because information learned in university can be applied on "ideal" conditions.For example, while a student gave an opinion of *"Idid not know what to do because there was not much information about students' knowledge levels, attitudes towards mathematics. At the same time, it is difficult to descend to the level of the students while lecturing"*, another student pointed out the problem by saying *"The information we have learned theoretically was difficult to implement in practice".*

Morover, when they mentioned about the possible problems that will arise when the teaching practice course score is effective in teaching selection, most of the pre-service teachers stated that practice teachers will not be objective when making an assessment and also different scores of different universities, different standards and attention spots might prevent an objective and objective rating.

Table 2. Pre-service teachers' solution proposals for problems

	Proposals	*n*	*f*
Suggestion of solutions for the problems related to the lecturer	At the beginning of the semester all the information about the course and the responsibilities of the teacher candidates should be clearly expressed	40	5
	Students should be monitored and supervised by course lecturers at regular intervals during the internship	40	3
	Should evaluate the course by considering the readiness of the teacher candidates	40	2
Suggestion of solutions for problems related to the application teacher	Teacher candidates should be allowed to teach for as long as they are responsible and classes in the school	40	6
	Practice teachers should be selected among volunteer teachers	40	5
	Practice teachers should identify pre-service teachers with other teachers, staff, school buildings	40	4
	Teachers should be open to innovations in their field and follow up to date methods and techniques	40	3

Suggestion of solution for the problems of school coordinator / school administrators	School managers and coordinators should be informed about the new system	40	6
	Pre-service teachers should be integrated with other teachers and not be excluded	40	4
	Pre-service teachers must be requested according to the size of the school	40	3
Proposal for solutions for the problems related to Application School	Practice schools where current and smart board use of course materials should be selected	40	6
	Implementation schools should be selected from schools with mixed male and female systems	40	4
	Classroom sizes should be reduced in schools	40	4
	Schools that can be easily reached by using public transportation vehicles should be selected as the application school	40	3
Suggestion of solutions for the problems related to the evaluation of the course	Evaluation forms should be rearranged in accordance with the truth	40	7
	Evaluation should be done with online forms on the computer	40	4
	Lectures should be taken a video instead of writing report	40	2
Suggestion of the solutions for the problems of teaching	Courses on teaching methods and techniques that can be used in practice should be increased	40	22
	School experience and teaching practice courses should be done gradually for 4 years	40	11
	It should be noted that pupils should address teacher candidates as teachers	40	7
	Schools should be the same in school experience and teaching practice courses	40	3
Suggestion of the solutions for the possible problems that will arise when the teaching practice course score is effective in teaching	Consistent scoring should be done throughout Turkey	40	23
	It must be explainen to practice teachers how important these scores are and how they should behave fairly	40	21
	By giving the application at the beginning of the university years, it can be more useful to have experience and to be scored and influenced at the next stage	40	6
	All pre-service teachers should be evaluated by one person	40	5

When Table 2. is examined, the pre-service teachers' suggest solutions for the problems experienced in School Experience and Teaching Practice courses is seen.

According to pre-service teachers, they should be informed by course lecturers about the course and their responsibilities that they are asked to take at the beginning of the semester. Also, course lectureres should monitor and supervisethe lesson at regular intervals during the internship while pre-service teachers lecturing.For example, a pre-service teacher commented, *"Course lecturers can think of their attitude towards us, taking into account our readiness to prepare."* Another prospective teacher has suggested a solution to the problem with the statement *"If the specified rules, if any, must be expressed clearly to us"*.Most of the teacher candidates recommend that practice teachers should be selected from among volunteer teachers and be open to innovations related to their teachers' areas and follow current methods and techniques.For example, a pre-service teacher has suggested a solution to the problem with the statement *"I think that it is necessary for the practice teachers to choose among those who are voluntary. It should also be encouraged that the importance of the experience that the teaching practice course will gain to us and that teachers make efforts in this regard.*

Another suggestion from teacher candidates is that school coordinators and administrators should integrate teacher candidates with other teachers and ensure they are not excluded and should be informed about the new system.It is suggested that in the selection of the implementation schools, the selection of the application schools where access is easy, the materials of the course are available and the intelligent board is used should be carefully selected and the presence of crowded classrooms should be reduced.

Pre-service teachers who were hesitant to write reports for the course offered to upload the assignments to the online system or to take a video of the lecture.Suggested solutions for the lectures are to increase the number of lectures on teaching methods and techniques that can be used in practice, and to include 4 years of school experience and teaching practice courses.As a suggestion to solve the possible problems that will arise when the teaching practice course score is effective in the teaching profession, it is mostly explained by the guidance teacher that these scores are important and should be treated fairly and consistently in Turkey.

Views of Course Lecturers

In the research, secondly, insructors' problems in teaching practice and school experience courses and suggestions for solutions developed for these problems have been examined. Table 3 presents the problems that experienced by the course lecturers and Table 4 presents the solution proposals for the problems.

Table 3. Course Lecturers' problems in teaching practice and school experience

	Problems	*n*	*f*
Problems related to the pre-service teachers	Pre-service teachersdo not know how to write a daily course report and prepare a lesson plan	10	7
	Pre-service teachers do not have responsibility	10	4
	Inadequate follow-up due to a large number of students per courselecturer	10	2
Problems related to the practice teachers	Escaping from workload	10	5
	Communication problems with course lecturer	10	4
	Being reluctant to lecture by pre-service teachers	10	3
	Leaving the class when the teacher candidates are lecturing	10	2
	Teacher candidates are allowed to solve their questions / problems solely in practice teachers' style	10	2
Problems related to the School Coordinator / school administrators	School administrators and coordinators have insufficient knowledge of the new system	10	5
	Communication difficulties between university and school	10	5
	Avoidance of workload, difficulties in sending necessary documents	10	3
Problems related to evaluation of the course	The evaluation forms filled out by the guidance teacher do not reflect the truth and give good grades to all	10	7
	No appropriate and up-to-date evaluation forms	10	5
	Observation reports are written from scratch and superficially written	10	4
	Little or no school experience theoretical lessons	10	4
Possible problems that will arise when the teaching practice	The fact that pre-service teachers will not objectively evaluate teacher candidates	10	10
	The fact that the lecturers' evaluation of the pre-service teachers is not healthy because lecturers can listen to the lectures that given by pre-service teachers only once or twice	10	2

When Table 3. is examined, the course lecturers' problems they have experienced in School Experience and Teaching Practice courses is seen.

The course lecturers of the course generally stated that the pre-service teachers are not responsible and they do not know how to write a report and prepare a lesson plan. Moreover, because of the high number of pre-service teachers per course lecturers, they underlined that the course lecturers were not able to follow the lessons of pre-service teachers while they were lecturing. The lecturer of the course expressed the problems he had with teacher candidates by saying*"Teacher candidates are not aware of their responsibilities and are not aware that their duties given to them will gain experience in their teaching lives. They do not even know how to write a report and prepare a lesson plan"*.

The course lecturers also stated that they had a communication problem with the practice teachers and that they were running out of work. However, the course lecturers stated that while the teacher candidates were lecturing, some practice teachers went out of the classroom while some practice teachers did not want the teacher candidates to teach the lesson.The lecturer of the course expressed the problems he had with practice teachers by

saying "*The practice teachers are running away from the workload, they see a lot of work to fill the "teacher candidate evaluation form" that they have to do once a week".*Another lecturer of the course also expressed the problem by saying *"Practice teachers tend to explain the topic themselves and have the teacher candidates solve the question".*

The other most frequently mentioned problem is that school administrators have problems sending the necessary documents and are passive when the school-university relationship is carried out in a healthy manner.They also stated that school administrators and coordinators also do not have enough knowledge about the newly introduced system of teaching practice.

Teaching staff stated that the assessment forms filled in by the practice teachers did not reflect the truth and gave good grades to all pre-service teachers, did not even make a constructive correction on the evaluation of the course, and argued that the evaluation made was not fair.In addition, teacher candidates talked about the fact that the evaluation forms filled out during the course are not up-to-date and inadequate.The lecturer of the course expressed the problems of the evaluation of the course by saying *"The practice teachers do not watch enough lectures of pre-service teachers and it seems that the practice teachers have always given good points in the evaluation forms that come to us and also no correction is seen. Evaluation is not done by taking seriously".*

Morover, when they mentioned about the possible problems that will arise when the teaching practice course score is effective in teaching selection, most of the course lecturersstated that because the practice teachers will not objectively evaluate the pre-service teachers and the lecturers of the course will be able to evaluate the teacher candidates' lectures only once or twice, the evaluation will not be healthy.

Table 4.Course Lecturers'solution proposals for the problems

	Proposals	*n*	*f*
Suggestion of solutions for the problems related to the pre-service teachers	Pre-service teachers should take 4-5 hours theoretical lesson about what, why, how they are requested, how the lesson plan is prepared and how to write the observation report before each of the lessons of School Experience and Teaching Practice	10	5
	Number of students per course lecturer should be reduced	10	4
	Should create a platform where pre-service teachers can upload reports and assignments online	10	2
	School Experience and Teaching Practice should be given in two school years	10	2
Suggestion of solutions for the problems related to the practice teachers	Application practice should be in contact with the courselecturer	10	5
	Application practice should be informed about school experience and teaching practice courses	10	4
	Should be supervised that practice teachers allow pre-service teachers lecture by the hours determined by MEB	10	3
	Practice teachers should be selected from guiding and communicating teachers to pre-service teachers	10	2
Suggestion of solution for the problems of school coordinator / school	School administrators and coordinators should be informed about the new system	10	4
	School administrators should choose between volunteer and experienced people to take responsibility for teacher candidates	10	5
Suggestion of solutions for the problems related to the evaluation of the course	Open-ended questions should be included in the evaluation scale	10	5
	A good scale should be prepared to measure whether the teacher candidates practice practically the theoretical knowledge they have learned in university	10	4

Suggestion of the solutions for the possible problems that will arise when the teaching practice course score is	Detailed information should be given by MEB to all universities and application schools about the evaluation of the course	10	7
	Practice teachers should be well trained, successful, open-minded, guiding teachers in their field	10	4
	Lecturers should monitor and evaluate each teacher candidate at regular intervals	10	2
	Student assessment should be done by a commission created by the practice schools.	10	2

When Table 4. is examined, the course lecturers' suggest solutions for the problems experienced in School Experience and Teaching Practice courses is seen.

According to course lecturers, first of all, due to the fact that one year is not enough due to the acquisition of experience and the evaluation of the student, the course should be given two years. They also recommended that pre-service teachers should take 4-5 hours theoretical lesson about what, why, how they are requested, how the lesson plan is prepared, how to write the observation report before each of the lessons of School Experience and Teaching Practice.An important view of the teaching staff's solution proposal is that a platform where teacher candidates can upload their reports and assignments online can be created and the number of students per teaching staff should be reduced to prevent intense workload.The lecturer related to this suggests a system *"in which homeworks should not be taken out of hand, students can load their homeworks until the last day"*.

Another solution proposal in the foreground is that practice teachers should be selected from guiding and communication open teachers for the teacher candidates and should be in contact with the courselecturer who are teaching and following the related course.

Regarding the evaluation of the course, they have emphasized that a good scale should be prepared to measure whether the teacher candidates practice in practice the theoretical knowledge they have learned in university and that open-ended questions should be included in this evaluation scale. Also stated that detailed information should be given by MEB to all universities and application schools about the evaluation of the course, otherwise healthy evaluation can not be made. For example, a pre-service teacher has suggested a solution to the problem with the statement *"If such a serious step is taken, the evaluation of this course should be made clear, the teachers who will guide should be carefully selected and lecturers who follow the pre-service teachers should follow the situation of each pre-service teacher and keep in touch with the practice teachers"*.

Views of Application Teachers

In the research, finally, practice teachers' problems in teaching practice and school experience courses and suggestions for solutions developed for these problems have been examined.Table 5 presents the problems that experienced by the practice teachersand Table 6 presents the solution proposals for the problems.

Table 5. Application teachers' problems in teaching practice and school experience

	Problems	***n***	***f***
Problems related to the pre-service teachers	Too many teacher candidates per guidance teacher	7	3
	Teacher candidates do not have responsibility	7	2
	Teacher candidates are missing in terms of content knowledge, pedagogical content knowledge and classroom management	7	2
Problems related to the course lecturers	Communication between the teaching staff and the guidance teacher is weak	7	5
	Course lecturers do not come to school to monitor and supervise teacher candidates	7	4
Problems related to the School Coordi	To make the application teacher choice arbitrarily	7	3
Problems related to proficiency of teaching	Teacher candidates' lectures constitute difficulties in completing curriculum issues	7	3

Possible problems that will arise when the teaching practice	The fact that evaluation is not objective	7	4
	Insufficient measurement tools used in existing evaluation methods	7	3

When Table 3. is examined, the practice teachers' problems they have experienced in School Experience and Teaching Practice courses is seen.

The practice teachers generally stated that the pre-service teachers are not responsible and they do not know how to write a report and prepare a lesson plan. Teachers have touched on the question that pre-service teachers are lacking in terms of pedagogical knowledge and classroom management.

One of the important problems with course lecturers is that communication between the teaching staff and the guidance teacher is weak and the lecturers do not come to the school to observe and supervise the teacher candidates.It is also emphasized that school administrators / coordinators arbitrarily select practice teachers for the teaching practice lesson, some teachers are given trainee teacher candidates despite their requests, and some teachers are not given teacher candidates despite their wishes.

Teachers have complained that the candidates' lectures prevent the curriculum issues from completing on time.The lecturer of the course expressed these problems by saying *"If every student tells a four-hour lecture, six students will take 24 hours, which is a lot. When will I teach? There are a lot of students per guidance teacher."*

Morover, when they mentioned about the possible problems that will arise when the teaching practice course score is effective in teaching selection, most of the practice teachers stated that the evaluation may not be objective and the measurement tools used in the existing evaluation methods are inadequate.

Table 6. Practice Teachers'solution proposals for the problems

	Solutions	***n***	***f***
Suggestion of solutions for the problems related to the pre-service teachers	The number of teacher candidates perapplication teacher should be reduced	7	3
	Before the application starts, the lecturer-teacher candidate and the guidance teacher should be collected and the mutual expectations of each side should be clearly expressed	7	3
	Lecturer candidates' course plans and teaching methods and techniques to be used should be checked by the relevant lecturer before application	7	2
Suggestion of solutions for the problems related to	Communication and cooperation between the university and the school should be carried out in a healthy manner	7	5
	Course lecturers should monitor and evaluate each teacher candidate at regular intervals	7	4
Suggestion of solution for the problems of school	Practice teachers should be selected according to certain criteria	7	3
Suggestion of the solutions for the possible problems	Evaluation should be fair and objective	7	4
	A new measuring tool should be developed to evaluate teacher candidates in every way	7	3

When Table 6. is examined, the practice teachers' suggest solutions for the problems experienced in School Experience and Teaching Practice courses is seen.

According to practice teachers, first of all, prior to the start of the course, the lecturer-teacher candidate and the guidance teacher should be gathered, the mutual expectations of each side should be clearly expressed, and the lesson plans of the teacher candidates and the teaching methods and techniques to be used must be checked by the relevant teaching staff before each lesson.Since it is not possible for all teacher candidates to teach 4 hours

of lectures, one of the most recommended solution is that the number of teacher candidates per application teacher should be reduced.

Another solution proposal in the foreground is that the communication and cooperation between the university and the school should be carried out in a healthy way and the teaching members who teach the course should monitor and evaluate each teacher candidate at regular intervals. They also recommended that school administers/coordinators should select practice teachers according to certain criterias.

As a suggestion to solve the possible problems that will arise when the teaching practice course score is effective in the teaching profession, the proposal for the development of a new measuring instrument that can be evaluated fairly and objectively and evaluates teacher candidates in every aspect stands out.

CONCLUSİON

In this study, it was examined that pre-service teachers who are educated in Gazi University, Elementary School Mathematics program, course lecturers and practice teachers' problems they have experienced in application courses and the solutions for these problems.The main result of the research is that in the School Experience and Teaching Practice courses, teacher candidates, course lecturers and practice teachers have different problems in many respects. The views that arise in this research are largely analogous as a result of many researches on the field.For example, according to the findings obtained by Seçer, Çeliköz and Kayılı (2010), problems such as lack of communication between school-university and teacher-school staff-school administrators/coordinators, students not seeing teacher candidates as teachers and inadequate theoretical lecture hour of teaching practice courses are problems that are also mentioned by pre-service teachers and course intructors in our study.

Eraslan (2009) pointed out that teacher candidates are overprinted due to the public personnel selection examination and that the internship can not take enough time. It can be said that these results overlap with the results obtained from this research.In the study of Göktaş ve Şad (2014),practice teachers identified course lecturers who did not go to the application regularly. This finding has also been expressed in our study by the practice teachers and pre-service teachers.Again, similar researches (Görgen, Çokçalışkan and Korkut, 2012; Aydın, Selçuk and Yeşilyurt, 2007) show that coordination between faculty practice schools, communication with school administrators, inadequacy of guidance skills of some practice teachers, and problems faced by students in practice schools are determined by teacher candidates. Similar problems have been identified by teacher and teacher candidates in this research.

As a result, the research findings obtained are found to overlap with those obtained from other similar studies (Bütün, 2015; Özay Köse, 2014; Çetintaş and Genç, 2005; Karadüz, Eser, Şahin and İlbay, 2009; Duman, 2013; Özmen, 2008; Özçelik, 2012; İnel Ekici and Delen, 2016).

Despite the fact that it has been a research subject for more than 15 years, it has been seen that the problems of school experience and teaching practice are still continuing in the same way.It is not possible to make an accurate assessment with the changes made without finding a solution to the problems in the light of these researches. It is suspicious that evaluating teacher candidates' scores on the basis of the scores obtained from teaching practice lessons will be fair.The ministry of education should take into account the problems faced by pre-service teachers, teaching faculty members and teachers in the practice school during these lessons and suggestions for resolving them, in order to remove these suspects, and a suitable program to be implemented by all universities should be prepared accordingly.

REFERENCES

Aydın, S. Selçuk, A. ve Yeşilyurt, M. (2007). Öğretmen Adaylarının "Okul Deneyimi II" Dersine İlişkin Görüşleri (Yüzüncü Yıl Üniversitesi Örneği). *Yüzüncü Yıl Üniversitesi, Eğitim Fakültesi Dergisi, 4* (2), 75-90.

Bektaş, M. ve Ayvaz, A. (2012). Öğretmen Adaylarının Öğretmenlik Uygulaması Dersinden Beklentileri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi, 8* ,209 – 232.

Bütün, M. (2015). Evaluation of the Lesson Study Model in Teaching Practice Course: Problems and Solutions. *Adıyaman University Journal of Educational Sciences, 2015, 5* (2), 136-167.

Büyüköztürk, Ş. (2012). *Sosyal bilimler için veri analizi el kitabı.* Ankara: Pegem Akademi.

Cohen, L., & Manion, L. (1994). *Research methods in education* (4th ed.). London: Routledge.

Çetintaş, B. And Genç, A. (2005). Views and Experiences of Prospective German Language Teachers on Practicum Courses. *H. U. Journal Education, 29*, 75-84.

Çiçek, Ş. ve İnce, M. L. (2005). Öğretmen Adaylarının Öğretmenlik Uygulaması Sürecine İlişkin Görüşleri. *Hacettepe Spor Bilimleri Dergisi, 16* (3), 146-155.

Duman, G. (2013). Evaluating Practicum Experiences Of Early Childhood Education Program From Students' Perspective. *Kastamonu Education Journal, 21*(4), 1661-1674.

Eraslan, A. (2009). İlköğretim Matematik Öğretmen Adaylarının 'Öğretmenlik Uygulaması' Üzerine Görüşleri. *Necatibey Eğitim Fakültesi Elektronik Fen ve Matematik Eğitimi Dergisi, 1*(3), 207-221.

Göktaş, Ö. ve Şad, S. (2014). Okul Deneyimi ve Öğretmenlik Uygulaması Dersi Uygulama Öğretmenlerinin Seçim Süreci: Ölçütler, Sorunlar ve Öneriler. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi (H. U. Journal of Education) 29*(4), 115-128.

Görgen, İ., Çokçalışkan, H. and Korkut, Ü. (2012). *The Functıonalıty Of The Practıcum Course In Terms Of Teacher Candidates, Mentors, And Practıce Lecturers. Muğla University Journal of Social Sciences Institute, 23*(2), 57-72.

İnel Ekici, D. And Delen, İ. (2016). Analyzing Math and Science Pre-Service Teachers School Experience Course Journals Shared in Web-Based Platforms. *Turkish Journal of Computer and Mathematics Education, 7*(2), 440-459.

Karadüz, A., Eser, Y., Şahin, C. and İlbay, A. (2009). The Effectiveness Of Teaching Practice Module In Opinions Of Final-Year Student Teachers. *Mustafa Kemal University Journal of Social Sciences Institute, 6*(11), 442-455.

Karataş, Z. (2015). Sosyal Bilimlerde Nitel Araştırma Yöntemleri. *Manevi Temelli Sosyal Hizmet Araştırmaları Dergisi 1*(1), 62-80.

Koç, C. ve Yıldız, H. (2012). The reflectors of teaching experiences: Diaries. *Education, 37*(164).

Özay Köse, E. (2014). Students' And Teachers-University Teachers' Attitudes Of "School Experience" And "Teaching Practice" (Sample of Erzurum). *Journal of Dicle University Ziya Gökalp Education Faculty, 22*, 1-17.

Özçelik, N. (2012). Prospective Foreign Language Teachers' Views of School Experience and Teaching Practice Courses. *Gazi University Journal of Education Faculty, 32*(2), 515-536.

Özmen, H. (2008). Student Teachers' Views On School Experience - I And – II Courses. *Ondokuz Mayıs University Journal of Education Faculty, 25*, 25-37.

Rıza, T., Hamurcu, H., (2000). Sınıf Öğretmenliği Bölümü Öğrencilerinin Okul Deneyimi ve Öğretmenlik Uygulamasına İlişkin Görüşleri, *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 8.*

Seçer, Z., Çeliköz, N., and Kayılı G. (2010). Okul Öncesi Öğretmenliği Okul Uygulamalarında Yaşanan Sorunlar ve Çözüm Önerileri. *Yüzüncü Yıl Üniversitesi, Eğitim Fakültesi Dergisi, 7*(1), 128-152.

Yıldırım, A. ve Şimşek, H. (1999). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Ankara: Seçkin Yayıncılık.

Yıldırım, A. ve Şimşek, H. (2005). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Ankara: Seçkin Yayıncılık.

YÖK (1998). *Fakülte-Okul İşbirliği*. Ankara: YÖK/Dünya Bankası Yayınları.

PROMOTING PARENTAL INVOLVEMENT IN MULTICULTURAL SCHOOLS: IMPLICATIONS FOR EDUCATORS

Brian Vassallo
B.Psy (gen), Dip Fac Inc Ed, MBEMAS(uk), MNAME(USA), MSc(uk)
Assistant Head, Mariam Albatool School
brianvassallo7671@gmail.com

INTRODUCTION

In Malta, the number of foreign children is causing educators to think of new strategies which diversifies parental involvement in schools. It is no secret that parental involvement is an essential component of children's education. However, the engagement of parents in intercultural school setups is becoming increasingly challenging.

Teachers whose background is rather homogenous and with minimal exposure to the cultural subtleties of students coming from different backgrounds tend to develop pedagogies which are apt to their own cultural makeup – unwittingly disregarding the fact and the changing cultural environment around them. Teachers tend to assume that that all students are able to learn irrespective of cultural and linguistic disparities, hence they adopt pedagogical strategies based on perceived value free assumptions and strategies. Pedagogical strategies are often applied as a 'one size fits all' without considering the impact which cultural and linguistic have on parental involvement and student academic success (Valenzuela, 2010; CCTC, 2013).

School staff may find it difficult to appreciate that students whose culture differs from the dominant culture are almost coerced into accepting the cultural establishment permeating their educational development in schools. Teachers may also be unwittingly placing on parents the huge burden of obtaining such capital, resulting in undue pressure on students which frequently goes unnoticed.

TEACHERS' PREPAREDNESS IN RESPONDING TO CHANGING CULTURAL CAPITAL

The multicultural mosaic present in our schools is unequivocally pervading our classrooms. The heterogenous mix of cultural diversity poses pedagogical and social challenge to educators. Teacher effectively in culturally diverse settings is becoming increasingly questioned in terms of pedagogical effectiveness and curricular content to ensure equal opportunities for academic success, social development and enhancement of self-esteem. Valenzuela (2010) coined the term "subtractive schooling" to describe how school manage to "subtract resources" from culturally different students by operating assimilationist pedagogical practices. These practices inherently undermine learning by robbing students of their cultural and linguistic heritage. When teachers lack awareness of different methodologies in education or systematically exclude students' languages of origin or cultural artefacts from the classroom, they are inadvertently working against students' adjustment and academic performance. They would also be undermining love for schooling, a situation which will continue precipitating as years go by (Valenzuela, 2010). Also, instead of engaging in a constant re-examination of their own pedagogical practices, teachers may unintentionally shift the blame to the parents, claiming lack of interest and involvement as the sole reason for child's lack of success (Bower & Griffin, 2011). These practices distabilise learning by robbing students of their cultural and linguistic heritage. When teachers ignore the cultural underpinnings of learning or exclude a student's language or cultural artefacts from the classroom, they are inadvertently working against students' motivation for academic success while undermining the inherent pleasure to learn. This has a negative ripple effect which continues to exert it's influence over time (Valenzuela, 2010). Instead of reassessing the effectiveness of their pedagogical paradigms, teachers tend to shift the blame onto parents-claiming that they (parents) are not living up to their responsibilities (Bower & Griffin, 2011). According to Gay (2010), such 'subtractive schooling' can be mitigated against by effectively implementing culturally responsive teaching – a teaching methodology that makes multiculturalism and culture the fulcrum of all instructional practices. Within this context, it is imperative to first understand the meaning of parental involvement and the various aspects and connotations associated with it.

Numerous studies have correlated the involvement of parents in their children's education as beneficial for their development and academic achievement (Beverage, 2013; Hill, 2009; University of Leicester, 2010). Research however suggests that although parental involvement has a positive effect on students' motivation, resilience and self-efficacy, grades being less affected (Fan and Williams, 2009).

DEFINITION OF PARENTAL INVOLVEMENT

The definition of parental involvement has proved to be multifaced and dependent on the various contexts it is being used. Some studies define parental involvement in terms of how much parents attend to school events such as prize days, sports days, mothers' and fathers' days, parents' days etc (Bower and Griffin, 2011). Others

stated that parental involvement may be defined in terms of their investment in the child's education- be it financial, intellectual, transportation, time, energy or simply supporting social and academic opportunities for their children (Fishman & Nickerson, 2015; Hayes, 2012; Ice & Hoover-Dempsey, 2011). These initiatives are perceived by educators as important elements in parental involvement because they fit within traditional expectations and are clearly visible. There are, however, other forms of parental involvement which may be less observable and not easy to define or include within the realm of parental involvement (Bower & Griffin, 2011; Lee & Bowen, 2006; Souto-Manning & Swick, 2006). Some studies suggest that culturally diverse parents, parents of low socio-economic status, or of limited educational background tend to be less involved in school affairs than parents coming from the dominant culture, parents of high socio-economic status, or those who are more educated (Artiles et al., 2010; Duchnowski et al., 2012; Rodriguez, Fishman & Nickerson, 2015; Wagner et al., 2012). Lack of childcare facilities can also be an additional hurdle for parents to participate as they would wish in their children schooling.

Moreover, different forms of parental involvement may go unnoticed because it occurs in the home and goes beyond traditional practices such as homework help (Bower & Griffin, 2011). For example, Latino cultures tend to invest a lot of time and energy to transmit knowledge onto the younger generations through the sharing of traditional stories and past family events (Souto-Manning & Swick, 2006). Other kind of parent involvement which frequently go unnoticed include time spent in religious activities such as observance of religious practices and holidays, the uphold of traditional family customs and time spent with grandparents (Souto-Manning & Swick, 2006). Though these parents may be perceived by school educators as 'less involved', they were actually expressing higher levels of involvement than others who do not uphold the same values. This research seems to imply that teachers have a rather limited understanding on what constitutes parental involvement (Bower & Griffin, 2011).

BARRIERS TO PARENTAL INVOLVEMENT

While teachers tend to place undue responsibility on parents for students' academic successes at school, there are other factors which impact heavily on educational outcomes. These include race, gender and socio-economic status (Galindo & Sheldon, 2012; Hayes, 2012; Wagner et al., 2012). Differences in social class (Lai & Vadeboncoeur, 2012) and in cultural values and beliefs (Chen & Garcia, 2011; DeGaetano, 2007; Lai & Vadeboncoeur, 2012) can cause strains between parents and schools. Differences in student outcomes can also be attributed to structural barriers faced by culturally diverse parents such as access to adult education, social status, access to child-care. Other studies point to a wide range of school and teacher factors which directly impact on parent involvement (Gay, 2010; Nieto, 2010; Valenzuela, 2010).

When teachers view parents in a "subtractive" manner they can be creating barriers to parental involvement (Chu & Garcia, 2014; Lai & Vadeboncoeur, 2012; Pollack, 2012; Ravindran & Myers, 2012). Negative perceptions held by school staff can also leave Culturally Diverse Parents feeling estranged from the school environments due to lack of trust in the system (Brandon et al., 2010). Moreover, many parents experience difficulty communicating with school staff due to language differences (Chu & Garcia, 2014; Torres-Burgo et al., 2010; Trainor, 2010). This impacts heavily on the readability and comprehension of school documents, such as school calendars, circulars, diary notes etc, not to mention the complex educational jargon present in official ministerial and governmental documentation. In one study, Vassallo (2014) reports how parents from certain countries had difficulty understanding the Individualized Educational Plan (IEP) of their child. This has resulted in parents communicating less with the specialists, thus resulting in minimal engagement time on how to help their child. Vassallo (2014) also contends that parents who find difficulty in English Language usage may find diagnostic terminology difficult to grasp. Terms such as 'differential diagnosis', 'low cognitive functioning' or 'developmental delay' may be difficult to understand, explain or even translate in another language. Further to his research, Vassallo (2014) maintains that navigating through the subtleties of cultures requires lots of insightful study and reflection. He stresses that body language, silence, colloquial expressions, pitch, intonation and pacing of speech all influence the overall interaction between parents and professionals. Terms such as 'careless', 'lazy', 'lacks discipline' may be familiar with parents but 'autistic', 'learning disabled', 'low intellectual functioning' may require lengthy explanations within culture specific contextual settings (Vassallo, 2014).

THE IMPACT OF CULTURAL AND OTHER DIFFERENCES ON TEACHER PERCEPTIONS OF PARENTAL INVOLVEMENT

Numerous studies concord that values and beliefs vary across cultures (Heggertveit-Aoudia, 2017). Culturally and Linguistically Diverse families offer a wide variety of beliefs, values and behaviours which when brought in close proximity, give way discord, mistrust and strenuous between parents and school staff (Nieto, 2010; Spring, 2012; Valdés, 2010). In their study on parent involvement in special education Garcia, Perez &Ortiz

(2000) found that the cultural interpretations attached to child development were in sharp contrast to the perspective of teachers and school psychologists. In particular they also found that what teachers perceived as "speech delay" was thought of as "normal" on the specific culture of the child and therefore were reluctant to respond to concerns presented by teachers about delayed verbal and non-verbal skills or low communicative abilities. Instead of allowing for disposition and 'psychological space' into understanding that families have their own cultural norms of understanding language development, teachers quickly branded parents as 'lacking concern', 'in denial' or 'resisting'.

Teachers and parents may hold different and conflicting expectations about parental involvement and that could be the influence of cultural, racial, linguistic, socio-economic, and other differences (Duchnowski et al., 2012; Fishman & Nickerson, 2015; Harry, 2008; Ice & Hoover-Dempsey 2011, Whitaker & Hoover-Dempsey, 2013). Research conducted by Lai &Vadeboncoeur (2012) claims that the mandatory involvement of parents during IEPs favours white middle class values since they are usually more skilled in advocating for parental and students' rights.

Contrary to popular belief, the involvement of parents in education requires high social skills such as turn-taking in conversations, effective communicative competence and sharing ideas. These skills vary significantly from culture to culture (Kozleski et al., 2008; Lai and Vadeboncoeur, 2012). The levels of parental involvement in schools depend entirely on the effectivity of school-home communication and the psychological space which parents are allowed exhibit within the school walls. School staff need to able to reach parents from a variety of linguistic backgrounds. If schools are planning for increased parental involvement, they would need accompanying material, such as pamphlets and e-mails to be properly translated in a language which parents understand (Trainor, 2010). Financial resources should be directed at employing translators and cultural mediators.

Lee & Bowen (2006) argue that parents whose culture is similar to that of the educational institution are able to capitalize more on the opportunities offered by the school. The researchers contend that these parents are able to bring their cultural and economic capital to good effect and to garner additional capital such an information on parents' meetings, seminars, ladies, circles and father clubs. Such activities will in turn have an increased influence their children's success. On the other hand, families whose cultural capital differs from the residing educational tend to take a passive role, thus precipitating a negative impact on student achievement (Lee & Bowen, 2006). Therefore, parental involvement tends to be heavily stirred towards parents whose culture is similar to that of the school (Lee & Bowen, 2006). Hence school authorities need to be cautioned against attributing lack of parental involvement of culturally diverse families to negligence or lack of interest. Apart from teachers needing intercultural competencies and skills to work with students who are culturally diverse, they also need to cultivate the skills necessary to work with families. Teachers often lack the necessary skills to effectively interrelate with culturally diverse families. They are often oblivious of the cultural capital which diverse families bring to the school and therefore are prone to underutilise an important cultural resource that can support their students' academic success. Teachers may even perceive this new cultural capital as a hinderance to their academic planning (Moll et al., 2013; Valenzuela, 2010). Some culturally diverse families possess limited English Language proficiency and this can further strengthen pre-existing beliefs on culturally diverse families. This will also place additional responsibilities and increased challenge on underprepared teachers (Sullivan, 2011).

RESEARCH METHODOLOGY

A Qualitative methodology was employed in the study to examine the intricacies of parental involvement as they forge their way through schooling their children. The methodology of the study is based on the phenomenological approach. The essential ingredient in phenomenological inquiry is the unique experience of people during their interaction with the phenomenon, the meaning they give to this experience and the interpretations arising from these meanings. Hence, the focus of phenomenology is not the world but rather the subjective experience of the person who experiences the world, in view of a particular issue or situation. In this study, the interviewing method served "the specific purpose of exploring and gathering experiential narrative material, stories or anecdotes, [and a] resource for developing a richer and deeper understanding of a human phenomenon." Interviews gave the researcher the opportunity to opportunity to 'delve deeply' (Denzin & Lincoln, 2017) into the perceptions of school leaders and their role in leading their multicultural school. Interviews have the inherent quality to glean data through the use of multi-sensory channels namely verbal, non-verbal, vocal and hearing channels (Cohen et al., 2007). Cohen, Manion & Morrison (2000, p.272) argue that information collected from interviews give "greater depth than is the case with other methods of data collection".

Twenty-one parents from ten different Maltese schools (state, church and independent) and from different cultural and linguistic backgrounds voluntarily participated in the study. Where possible and necessary, a community leader was sought by the researcher to serve as a translator and cultural interpreter. Also, the interview style was modified for participants whose first language is not English. Where possible interviews were conducted with both parents at the same time. These provisions ensured a high degree of interaction between the researcher and the respondent, enabling seamless conversation together the added benefit of clarifying arising perceptions or misconceptions (Ribbins, 2006).

Prior to interviewing parents, a meeting to was held to explain the purpose of research and the process that was going to be used during the interview sessions. Participants were also informed that interviews were to be semi-structured i.e. researchers might need to probe through responses for the sake of clarity, need for repetition or more depth of responses (Gray, 2004). Such interactive process facilitated the researcher into gaining more in-depth insights on the participants' attitudes, opinions and actions (Kendall, 2008).

Interview respondents were assured of the utmost confidentiality and anonymity throughout the study. The highest of ethical standards were rigorously maintained and respondents were given the liberty to pull out from the study at any time they desired. Participants were also assured that transcription of data will be used for research purposes only and would be destroyed once the study is over.

The study was conducted during specific periods of the year, where the researcher had the opportunity to meet parents. A purposive sample was used in the study. This consisted of a non-probability sample that is selected based on characteristics of the population and the objectives of the study. Hence parents were selected on the basis that 1) nationality being non-Maltese and 2) have been in Malta for less than five years. Confidentiality and anonymity were assured throughout the study. The interviews consisted of a number of open ended questions lasting around 45 minutes.

The research questions identified in the study were:

1) To what extent do you participate in school activities?
2) What do you think are the major obstacles for parents not participating in school activities?
3) How and in what way can these obstacles be challenged?

Data analysis was conducted with the assistance of, CAQDAS (Computer Assisted Qualitative Data Analysis Software, 2017) – a computer assisted qualitative analysis software which helped the researcher to identify emergent patterns and themes which could subsequently be utilized as the fabric upon which further analysis could proceed.

RESULTS AND ANALYSIS

Parents suggested that their communities need to be more representative across all levels of the schools including at management level. Some parents, however, seemed to have a limited understanding of what parental involvement entails while others displayed reluctance to become involved due to work commitments. This lack of common understanding of what parent participation entails could be a primary reason for lack of involvement. Twelve parents out of the twenty-one, commented that their school never informed them as to the extent they are expected to participate. Five others commented that they limited themselves to 'important' formal meetings such as the prize day and the Parents' Day. Two parents suggested that policies need to be inclusive of the different cultures citing as example the Muslim Ramadam period as non-ideal to hold parents' days or parents' evenings. According to these parents, such insensitivity could deter parents' future participation in school events. Nine parents insisted that there has to be a policy which paves the way for allowances for parents coming from different socio-linguistic cultures, as these would lure parents to social functions organized by the school. They also commented that the non-provision of translators (both linguistic and cultural) such as the one employed for the interview, would be an added asset if participation is to be enhanced. According to these parents the same holds to digital and written communication, citing the school calendar, newsletter and websites as possible avenues where different linguistic communication can take place. A parent commented that the frequently she finds herself having to ask her child what is actually written on some of the school circulars.

The same goes with verbal communication. Six parents commented that sometimes they phone school and cannot have their message or complaint properly addressed due to the linguistic barrier. They say that policies need to be enacted which respect the fact that some parents are limited in both the English and Maltese

Language. They also suggested that parents' committees, apart from being more inclusive and representative, need to deliver these important messages to the school and educational authorities.

One parent said that members of the board of trustees in her school did not reflect the ethnic composition of parents and consequently policies are not reflecting the cultural composition of the students. Since parents on the school board of trustees make decisions on behalf of all school parents and children there has to be a cultural representation which "makes sense".

All parents believed, albeit to different extents, that schools are in no way directly responsible for racism or xenophobic attitudes which systematically excluded parents at the expense of others. However, the fact that the medium of communication in schools is English or Maltese inadvertently contributes to somewhat marginalise parents. As suggested by Valenzuela (2010) these lacunae have a profound impact on the level parental involvement in schools and consequently on students' progress and future successes.

The low levels of productive interactions between schools and parents has led some teachers and school leaders to conclude that parents from culturally diverse backgrounds do not demonstrate sufficient interest in their children's education and lack cooperation with schools. This viewpoint was continuously being challenged by the parents during interviews, who have, in more ways than one expressed possible reasons and also came up with solutions.

The absence of school policies which specifically target involvement from culturally diverse families need to be seriously considered. Such a provision is considered as "the most important determinant of effective home-school programmes" (Epstein & Sanders, 2000, p. 289).

Restricted opportunities for interaction between culturally diverse families and school staff are evident, with parents blaming the lack of accommodation for those parents whose English is not their first language. It must be stated that although some of the parents interviewed did possess excellent proficiency in English, they still suggested a culturally proficient mediator to assist them when interacting with school staff. Finding seem to support research conducted by Chrispeels (19901, 371) who stated that schools tend to direct their efforts at 'fixing parents rather than altering school structures and practices'. This is because problems are bound to inflate if cultural differences between parents and educators are not bridged by professionally trained people.

LIMITATIONS OF THE STUDY

It was suggested by community leaders that the researcher could have informed parents whose culture is different from the mainstream, and/or with limited proficiency in English language they are entitled to the services of a cultural/linguistic interpreter rather than directly asking if they need one. This may have been the reason why some refused assistance. Community leaders also suggested that interviews with families could have been conducted at the same time so that parents feel more comfortable expressing themselves. Time accommodation would have been an ideal option as is the length of engagement time between research and participants prior and after interviews.

The presence of family member to serve as cultural interpreters could have contaminated the results of the study. Also, family members could have been better involved in planning interviews as this would give a clear message that their input is important. Meeting these parents at school could have been a further deterrent. In future, such interviews could have been conducted at the participants' home or workplace.

CONCLUSIONS AND RECOMMENDATIONS

School need to be cognizant of the importance to acknowledge that *all* parents strive to ensure the best education for their children. Where parents feel a sense of detachment from school, it is the schools' moral responsibility to look out for reasons why this is so. School need to avoid engaging in assumptions that certain groups of parents lack the necessary interest for their children to progress. This is supported by research conducted by Van Wyk & Lemmer (2009, p.58), who called such assumptions "a fallacy".

School Educators need to be more sensitive and tuned to the potential offered by diverse family cultures. Such potential can be cultivated by creating effective home-school partnerships and recognizing the wealth which such endeavour is able to generate in schools. Schools are the ideal places for families of different cultures to meet and therefore it is up to the school to construct positive atmospheres and welcome parent warmly. This includes taking into account the multiple languages, cultures, race, socio-economic backgrounds, beliefs and religions practices of the parent body. School need to acknowledge that parents and students coming from cultures other that the mainstream deserve full respect and this needs to be exemplified into an array of

communication strategies taking into account the linguistic, prosodics, behaviours of all. In view of this, the employment of cultural translators/ mediators need to be seriously considered.

The enterprise of prompting more active involvement from parents is a Senior Management issue and needs to planned and implemented with the rigorosity it deserves. Senior Management Teams are in a position to catalyse processes which promote opportunities for parents to become involved in their children's education of their children, irrespective of their backgrounds, socio-economic status or proficiency in the dominant language. A strong leadership ethic and staunch commitment by all stakeholders form the essence of such initiatives. Policies aimed at richer parental involvement need to be rewritten to reflect the realities of todays and future globalised education. The involvement of parents from diversified backgrounds into the construction, implementation and evaluation of newly of newly crafted policies would set the pace for increased cooperation.

In secondary and upper secondary schools, special assignment teams composed of parents, teachers and students can be set up with the aim of coming up with strategies of how to mitigate against difficulties related to cultural disparities between parents and staff or between staff and students. These strategies would then need to be evaluated for their effectivity in dealing with difficult situations.

Teacher training programmes need to be proactive and acknowledge the necessity for teachers and associated professions to work with parents of multicultural origin. Programs would need to include an array of knowledge about cultures and the subtle differences which exist across and within cultures. They would also include the practice of skills sets necessary for the effectively deal with situations arising out of cultural incongruities. It is by forming strong partnerships between parents and teachers, coupled with able leadership that we will witness benefits on our students.

REFERENCES

Artiles, A. J., Kozleski, E. B., & Trent, S. C. (2010). Justifying and explaining disproportionality, 1968-2008: A critique of underlying views of culture. *Exceptional Children*, 76(3), 279-299.

Beverage, L. (2013). Beyond the Classroom: Be Your Child's Learning Role Model. [Online]. Retrieved from www.education.com/magazine/article/beyond-classroom-be-learning-role-model/. [Accessed on 1st December, 2017].

Bower, H., & Griffin, D. (2011). Can the Epstein model of parental involvement work in a high minority, high-poverty elementary school? A case study. *Professional School Counselling*, 15(2), pp.77-87.

CCTC California Commission on Teacher Credentialing (2013). California teaching performance expectations. Retrieved from http://www.ctc.ca.gov/educator-prep/TPA-files/TPEs-Full-Version.pdfGoogle Scholar. [Accessed on 26th November 2017].

Duchnowski, A. J., Kutash, K., Green, A. L., Ferron, J. M., Wagner, M., & Vengrofski, B. (2012). Parent support services for families of children with emotional disturbances served in elementary school special education settings: Examination of data from the Special Education Elementary Longitudinal Study. *Journal of Disability Policy Studies*, 24(1), pp.36-52.

Fan & Williams (2010). The effects of parental involvement on students' academic self-efficacy, engagement and intrinsic motivation. *Educational Psychology* (1) pp. 53-74

Fishman, C. E., & Nickerson, A. B. (2015). Motivations for involvement: A preliminary investigation of parents of students with disabilities. *Journal of Child and Family Studies*, 24, pp.523-535.

Galindo, C., & Sheldon, S. B. (2012). School and home connections and children's kindergarten achievement gains: The mediating role of family involvement. *Early Childhood Research Quarterly*, 27, pp.90-103.

Gay, G. (2010). Culturally responsive teaching: Theory, research, and practice. New York, NY: Teachers College Press.

Hayes, D. (2012). Parental involvement and achievement outcomes in African American adolescents. *Journal of Comparative Family Studies*, 43, pp.567-582.

Heggertveit-Aoudia, S. (2017). Culture, Values and the impact at work. [Online]. Retrieved from http://www.diversityjournal.com/9823-culture-values-and-the-impact-at-work/. [Accessed on 1st December, 2017].

Hill, N. (2009). *Parental involvement*. [Online]. Retrieved from http://www.education.com/pdf/parentinvolvement/. [Accessed on 2nd December 2017].

Ice, C. L., & Hoover-Dempsey, K. V. (2011). Linking parental motivations for involvement and student proximal achievement outcomes in homeschooling and public schooling settings. *Education and Urban Society*, 43(3), 339-369.

Ito, K. (2017). Cultural Differences and the Dynamics of Collaboration. [Online]. Available from http://www.wacd.ucla.edu/cip/archive/appexbook/culturaldifferences.html. [Accessed on 2nd December, 2017].

Lee, J. S., & Bowen, N. K. (2006). Parent involvement, cultural capital, and the achievement gap among elementary school children. *American Educational Research Journal*, 43(2), pp.193-218.

Rodriguez, R. J., Blatz, E. T., & Elbaum, B. (2014). Strategies to involve families of Latino students with disabilities: When parent initiative is not enough. *Intervention in School and Clinic*, 29(5), pp.263-270.

Souto-Manning, M., & Swick, K. J. (2006). Teachers' beliefs about parent and family involvement: Rethinking our family involvement paradigm. *Early Childhood Education Journal*, 34(2), pp.187-193.

University of Tübingen (2017). Parents' motivation influences students' academic outcomes. ScienceDaily, [Online]. Accessed from<www.sciencedaily.com/releases/2017/05/170508083417.htm>.[Accessed on 26th November 2017].

University of Leicester (2010). Parents' effort key to child's educational performance. ScienceDaily. Retrieved June 2, 2015 from www.sciencedaily.com/releases/2010/10/101029121554.htm 45

University of New Hampshire (2008). Parental Involvement Strongly Impacts Student Achievement. ScienceDaily. Retrieved June 21, 2015 from www.sciencedaily.com/releases/2008/05/080527123852.htm

Valenzuela, A. (2010). Subtractive schooling: US-Mexican youth and the politics of caring. Albany, NY: Suny Press.

Vassallo, B. (2014). Bridging the Cultural Gap: Strategies for Multicultural Teaching and Learning in Malta. *International Journal of Learning, Teaching and Educational Research, 7(1),*

Wagner, M., Newman, L., Cameto, R., Javitz, H., & Valdes, K. (2012). A national picture of parent and youth participation in IEP and transition planning meetings. *Journal of Disability Policy Studies*, 23(3), 140-155.

TEN SIMPLE TIPS FOR TEACHING UNDERPREPARED STUDENTS IN COLLEGE CLASSROOMS

Beatrice Darden-Woody
Norfolk State University/ Department of Health, Physical Education and Exercise Science, Norfolk, VA, USA
Email: bdarden-melton@nsu.edu

Mona Bryant-Shanklin
Norfolk State University/Department of Early Childhood, Special and Elementary Education, Norfolk, VA, USA
Email: mmbryant-shanklin@nsu.edu

ABSTRACT
Some students who enter college may be "underprepared" to compete at the college level. Because of less competitive entry requirements, many of these students may be attracted to minority serving institutions (MSI's) and community colleges. The growing number of underprepared students is well documented in the literature (Sheree, Wilson, & Dole, 2014; Aronowitz, 2011; Wilson, 2010; Dobell, 2006). Consequently, college faculty, particularly those who teach at minority serving institutions (MSI's) and community colleges may be experiencing increased numbers of students who simply do not possess basic skills in reading and mathematics appropriate for college level success. The result is that these students end up performing on a "learning curve" or a compromised rate of performance which may prevent progress necessary to graduate and/or compete in job markets available to college educated students. Additionally, professors and instructors are forced to include additional material in their lectures to try to "catch these students up" to the point of college-ready students. This article is written to provide tips to teaching faculty who encounter "underprepared" students.

INTRODUCTION
If a student is unable to complete college level work adequately, but has been admitted to college, teaching faculty are forced to teach these students utilizing a "learning curve." According to MerriamWebster.com, a "learning curve" is "a person's progress in gaining experience or new skills." Students that have a very steep learning curve often have a large amount of information, content, and material that must be learned quickly in order to perform successfully in the college classroom. These are the same skills that are needed to pass certification/licensure criteria and tests. These students are referred to as "underprepared" college students. Community colleges and minority serving institutions (MSI's) often serve a high number of "underprepared" students, who may also be non traditional students, parents and working adults seeking a higher education (Bay, 2010; Maxwell, 2010; Wilson, 2010).

When underprepared students enter college, they are already behind their college-ready peers. The underprepared student must compensate for their learning curve by quickly gaining both pre-college skills and new college level information at the same time, which puts them at a distinct disadvantage to their better prepared peers. Underprepared students spend a great amount of time in their college years trying to fill in the missing gaps and "catch up" with their peers. These students often have extensive difficulty in understanding important terms and concepts that are usually learned prior to college years. Additionally, these students are tasked with a constantly more demanding environment if they are lucky enough to progress past the initial year or two in college. Understandably, these students are also at higher risk of lower performance and/or eventual "drop out."

TIPS FOR WORKING WITH UNDERPREPARED STUDENTS
While instructional faculty may be fully prepared to convey their particular subject matter to typical college students, they may find themselves floundering when they encounter underprepared students in their classes. They find themselves tasked with providing these students with foundational or basic information that was designed to prepare them for college level work. Many new and even, sometimes seasoned professors have the expectation that students they encounter in their classes possess a minimum level of knowledge and understanding upon entering college/university settings. By providing instructional faculty with simple tips to assist them in working with underprepared students, they will have the tools to help these students not only perform better in their classes, but be successful in the college environment. In order to work with these students successfully, instructional faculty may find it helpful to provide these students with the following:

#1 Definitions, Definitions, and More Definitions. Definitions make the context/material more distinct or clear. According to Frey (2010) and Huntley (2006), it is critical to include reading skills and comprehension instruction with lecture materials. This is because in college, reading is not only the basis of how much information is learned but additionally, college level reading is more complicated than high school reading. By including basic definitions for even the simplest of terms, instructors will help students build upon their base or foundational knowledge while building skills specifically targeted by the course. Student who are able to "work at" unlocking meaning by calling upon sophisticated reading comprehension skills and strategies, regardless of their background are more likely to succeed in college core courses (Manzo, 2006). Textbooks, journal articles, and other written materials often use difficult to understand jargon which may be challenging to even college-prepared students, and be "impossible" for underprepared students to master. By recognizing and "breaking down" the jargon, instructors are able to assist the underprepared student by making reading material more relatable to the student. Even though textbooks may provide highlighting of key terms within each chapter, if instructional faculty are able to identify and target culturally biased terminology or terminology that is not familiar to students, and provide alternative terminology that they are able to readily relate to, the disadvantage of the learning curve that these students posses will be addressed. Instructors can pull students in on defining these key words by creating an assignment or activity for students where they actually are tasked with defining terms in ways that they can better understand.

#2 Expanded Outlines, PowerPoints, and Notes. Instructional faculty attempt to increase learning by incorporating a variety of technologies in their instructions, however, for many learning tasks, traditional teaching tools such as lecture, textbooks, and instructor interaction have been found to be more effective, especially for the underprepared student (Henriques & Kusse, 2011). Typically, traditional PowerPoint slides are incorporated into class with limited words, few sentences, and bulleted phrases. When working with the underprepared student, it may be useful to provide more extensive notes with PowerPoint presentations/slides. As a number of underprepared students are also students who may be older, less economically advantaged, or may not have had access to "the latest" technological advances, the incorporation of more traditional assists such as class notes, outlines, and handouts may be giving students ways of leaning that they are more comfortable with, rather than using "cutting edge" new technologically based methods. For some of those students, self-taken class notes, PowerPoints, outlines, and handouts may be the most valuable instructional materials needed for understanding.

#3 Assessments over Fewer Chapters. Many times when teaching students with a learning curve that are underprepared for college, assessments can be given more frequently and in alternative formats, rather than traditional "high stress producing" paper and pencil tests. Assessments can be given to classes in the form of presentations, assignments, and even games. Additionally, using these types of assessments allows for the use of whole class evaluation to asses students' understanding, although the instructor is tasked with paying closer attention to who is responding and making sure that responses are equitably provided. Even if paper and pencil tests (which may be administered electronically or via computer) are given, they may be given more frequently and cover less material than usual. This will reduce the chances of students getting overwhelmed by having to learn an abundance of information at a given time. By giving frequent tests and assessments, students are also less likely to procrastinate with class tasks and studying (Tincotti, 2010).

#4 Allow Retakes on Test. Test anxiety is a common problem among test takers and especially among underprepared students. Students that are underprepared for college may experience lower confidence levels or self-efficacy skills than college-ready students (Navarro, 2012). If instructors are able to remove initial fears by providing tests where students know what's expected, students are able to perform at higher levels, especially if they are able to count on retest opportunities. Instructors may offer retakes on tests for students who have difficulty with testing and also incorporate some type of remedial activity as a way of reteaching skills (Tincotti, 2010).

#5 Allow Resubmission of Assignment. When students perform unsatisfactory on an assignment(s), it may serve the student well to have a second chance to resubmit the work (Tincotti, 2010). Underprepared college students may be confused or unclear about the task requirements or directions for an assignment. These students may be hesitant to ask questions for clarity for fear of exposing their lack of skills. Therefore, they guess and

assume that they are following guidelines, instructions and meeting the criteria of the assignment. If the student is "wrong in their assumption," the assignment will be wrong. The student may be very capable of providing satisfactory work but due to miscommunication or misinterpretation of instructions and guidelines, students perform at a lower level. Once an assignment(s) is submitted and the professor recognizes that the students are clearly mistaken regarding instructions and guidelines, simply providing an opportunity to resubmit assignments with the new understanding and clarity will lead to increased student performance and outcomes.

#6 Allow Flexibility in Time. Time needed to ensure that individual learning needs are addressed will vary greatly in typical classroom settings (Coleman, 2005). For underprepared students in college classrooms, the variability of time needed to complete assignments may be significantly increased: with some assignments being easily conquered, and others requiring more time and attention. With more difficult assignments, note that students may approach tasks with some hesitancy, or even try to avoid completing required tasks. Additionally, task completion may be accompanied with some anxiety or distress. Distress hinders clear thinking, judgement, and performance. This along with time pressures of completing tasks within the confines of class time may lead to poorer student performance, slower completion time, and even result in some students giving up all together. By allowing students to work at their own pace and readiness, without the fear of completing tasks within the confines of class time, may result in a richer learning experience for students. Working at their own pace will allow students to complete tasks when their fears and emotions are not so heightened due to strict deadlines. In a more relaxed environment, students, especially those who are underprepared may relax and perform significantly better on assignments.

#7 Cross-Reference Partnered/Group Activities. By allowing time and opportunities for collaborative group work, underprepared students may be able to access knowledge that could otherwise be missed without the benefit of feedback of peers. Collaborative learning has proven to be an effective and preferred method of student learning and being actively engaged in the classroom (Freeman & Wash, 2013). Cross-reference partnered or group activities allow students the opportunity to teach one another what they have learned and understand (Freeman & Wash, 2013). Collaborative learning activities also help support the development and enhancement of critical thinking skills through debate, contrast and comparison of peer responses and explanations. Students have opportunity to probe for deeper understanding of difficult or confusing concepts. During these cross-reference group activities, students are forced to help and teach peers how to solve problems, perform calculations, analyze, and evaluate (McClenney & Peterson, 2006). Additionally, through this process, students are able to share and compare information on their own terms in their own time, which can help students retain new knowledge.

#8 Study Guides and Assignments. The creation and use of study guides can be counterproductive for underprepared students if the answers and/or responses are inaccurate. By incorporating self checking through cross class collaboration and instructor input, the accuracy of study guides used to prepare for assessments can be enhanced. This will result in higher success on assignment and test performance. Encouraging the use of questions and short answers in study guide development can also make information more accessible for the underprepared student. As with other student developed study materials, all information should be checked for accuracy (Tincotti, 2010; Pilotti, Chodorow, & Petrov, 2009).

#9 Monitor and Review Tests and Assessments. Instructors who work with underprepared college students should be careful to incorporate the review of these materials often to assure that they are not using and re-using materials that are confusing, misleading, or contain "difficult to understand" language. This problem may exists with instructor prepared materials as well as those that are prepackaged and supplied by textbooks publishers as supplementary materials. By reviewing not only how students perform on tests, but also looking at patterns of items missed by groups of students, instructors are able to detect weaknesses in their instruction, test construction and student understanding. This type of review also allows instructors to monitor tests for items that may be included but was not covered in class. With today's technology there are many programs that offer quick, convenient item analysis of correct vs incorrect responses. Test items that are flagged to have a high rate of failure should either be modified for clarity or removed completely from the test (Gajjar, Sharma, Kumar, &

Rana, 2014). If there is a significant pattern of incorrect responses within an assignment or test, students should not be penalized.

#10. Simply "Show that you Care." When instructional faculty display genuine caring and concern for students, a higher level of commitment is conveyed to students, which can result in increased student effort. In college classrooms, as in all learning environments, instructors may be seen by students as "parent figures" and as such, students may strive to "perform to please" and to earn higher grades. As "loco parentis," it is our duty and responsibility to use that position to the students' advantage: praising and rewarding them when appropriate to do so, not only as reward, but also as reinforcement to boost moral and self esteem. Underprepared college students may enter the classroom environment with lowered self-esteem and self-efficacy (Navarro, 2012). Instructors must encourage students through positive motivation and high expectations to support successful academic experience for all students in their classes, but most especially, this kind of support can be beneficial for the underprepared student.

CONCLUSIONS

These "ten tips" for working with underprepared students are simple, yet easily implemented methods that can enhance the experience of underprepared students in college classrooms. As college level instructors, it is our job to assure that all students have maximized opportunities for success, even when they arrive "not quite ready" to tackle learning in ways that we might expect. When we work with underprepared students, we may have to meet students where they are rather than just "half-way" to assure their success in our classes. Our job, after all is to teach.

REFERENCES

Aronowitz, S. (2011, February 16). Survey shows college students overwhelmed, underprepared. Campus Technology. Retrieved March 1, 2011, from http://campustechnology.com/Articles/2011/02/16/Survey-Shows-College-Students-Overwhelmed-Underprepared.aspx

Dowling, C.B. (2011). Effects of Quizzing Methodology on Student Outcomes: Reading Compliance, Retention, and Perceptions. International Journal for the Scholarship of Teaching and Learning. Retrieved December 1, 2017, from http://www.georgiasouthern.edu/ijsotl Vol. 5, No. 2 (July 2011).ISSN 1931-4744 @ Georgia Southern University.

Coleman, M. R, (2005). Academic strategies that work for gifted students with learning disabilities. TEACHING Exceptional Children, Vol. 38, No. 1, pp. 28-32.

Dobell, E.S. (2006). Ready yet? The Journal of the New England Board of Higher Education. Vol. XX(4).

Freeman, G. G., & Wash, P. D. (2013). You can lead students to the classroom, and you can make them think: Ten brain-based strategies for college teaching and learning success. Journal on Excellence in College Teaching,24(3), 99-120

Frey, C. (2010). Crash course in preparedness: Start sharpening your analytical skills early, and don't shy from a challenging read. U.S. News & World Report. September 2010.

Gajjar, S., Sharma, R., Kumar, P., & Rana, M. (2014). Item and test analysis to identify quality multiple choice questions (mcqs) from an assessment of medical students of Ahmedabad, Gujarat. Indian Journal of Community Medicine, 39(1)17-20.

Harris, D (2012. Far too many students still aren't ready for college. Indianapolis Business Journal. The Mind Trust. September 29, 2012.

Henriques, J.B. & Kusse, L.I. (2011). Students who aren't prepared for college find less value in books and lecture than students who are prepared. International Journal for the Scholarship of Teaching and Learning. 5 (2) 15. Article 15. Available at: https://doi.org/10.20429/ijsotl.2011.050215

Huntley, H. (2006). Essential Academic Vocabulary: Mastering the Complete Academic Word List. Cengage. 1st edition.

Manzo, K.K. (2006). Graduates can't master college text: Study finds students fall off track after 10th grade. Education Week, 25(25)1.

Maxwell, B. (2010). Schools, community colleges must team up. St. Petersburg Times, June 6, 2010. Web edition. Access World News. 1P.

McClenney, K. & Peterson, G. (2006). Effective educational practice: what we're learning from community college faculty. Community College Journal, (76) 76-80.

Navarro, D. (2012). Supporting the students of the future. Change: The Magazine of Higher Learning, 49 (5)43-51.

Pilotti , M., Chodorow , M., & Petrov, R. (2009). The usefulness of retrieval practice and review-only practice for answering conceptually related test questions. The Journal of General Psychology, 136(2), 179–203.

Sheree, S. E., Wilson, T.J., & Dole, J.A. (2014). Ready or not. Journal of Adolescent and Adult Literacy. 58 (4) 299-307.

Tincotti, M. (2010). Improving outcomes for college students with disabilities. College Teaching. 52 (4)128-134.

Wilson, R. (2010). The Ivory Sweatshop: Academe is no longer a convivial refuge. Chronicle of Higher Education, 00095982, Vol. 56 (41).

USE IT OR LOSE IT; L2 LISTENING ATTRITION OVER A SEMESTER

Associate Professor Dr. Omar Karlin
Toyo University.
email: o_karlin@yahoo.com

Adjunct Professor Dr. Sayaka Karlin
Toyo Gakuen University.
email: sayakakarlin@yahoo.co.jp

ABSTRACT
Forty Japanese university students in an intercultural communication program at a private university in Tokyo were split into two groups to determine the L2 listening attrition that occurred over a semester. The treatment group was given intensive listening homework which involved transcribing a popular American television show, while the control group was not given any listening homework. After calculating Rasch person measures for each student, and conducting paired-sample t-tests, results indicated a significant decrease in L2 listening ability relative to other students for the control group. Of the five variables being measured on an end-of-semester listening exam; *all items*, *all listening items*, *non-textbook listening items*, *textbook listening items*, and *vocabulary items*, a significant decrease was evident in the variables *all items* ($t(20) = 3.61$, $p < .05$), *all listening items* ($t(20) = 2.89$, $p < .05$), and *vocabulary items* ($t(20) = 2.90$, $p < .05$) for the control group. No significant decreases in ability were evident for the treatment group.
Keywords: EFL, listening, homework, transcription, L2 attrition

INTRODUCTION

The phrase *use it or lose it* is often used but sometimes not fully understood, mostly because of the ambiguous *it* pronoun. What is *it*? *It* can be used to cover a large number of situations, with varying degrees of truthfulness to the phrase. For anyone that has made a resolution to exercise, *it* can refer to the process of staying fit, building muscle, and/or losing weight, and usually the phrase *use it or lose it* has never rung truer. Stopping an exercise routine can result in a reversion to the pre-exercise self within weeks or months (i.e. not being fit, lost muscle, and the gaining of weight). However, there are instances when the phrase *use it or lose it* rings hollow, such as with riding a bicycle. People can go long periods of their life without ever riding a bicycle, yet rarely revert to their pre-bicycle-riding selves. In fact, the well-known phrase *it's like riding a bike* basically means the opposite of *use it or lose it*; even if you don't use it, you won't lose it. Many activities, including using a second language, fall somewhere between these two poles.

Among the four skills, listening is the skill that many teachers have the most difficulty with teaching. With productive skills such as writing and speaking, learners produce something that teachers can assess, and with reading, learners at least have a reading passage which is physically present, which the teacher can reference during a lesson. However, with listening, teachers must impart a skill in which the students produce nothing, and there is no physical remnant of the listening passage to reference. Faced with these challenges, many teachers resort to *assessing* listening, rather than *teaching* listening. The chief teaching methodology than many listening teachers employ is to ask comprehension questions to their students, which does little to improve ability. If teachers do not take a more active role in trying to improve L2 listening ability through transcription and reflection (or other activities), L2 attrition can occur. Even though receptive skills are thought to be relatively stable, this study demonstrates that L2 listening attrition can occur within a single semester if students are not given adequate listening homework.

Literature Review

entry into university

The zenith of studying intensity for Japanese students is high school. From the time that students enter school at five years old, there is a gradual intensification of competition to matriculate into well-regarded schools (Mawer, 2015; Mori & Baker, 2010). This intensification modestly begins in elementary school, however because the choice of public junior high school for many is restricted to geographical proximity, competition is more modest. However, as students enter junior high school, competition intensifies significantly as there are no restrictions for high school matriculation, meaning that students can enrol at any high school that will have them. Junior high school students study intensely in order to secure admission into a prestigious high school. In fact, the importance

of success on high school entrance exams has resulted in a large system of shadow education in Japan (an industry of 93.6 billion yen in 2013; Mawer, 2015), in which parents pay for their children to attend private evening classes to supplement their normal schooling. Once students matriculate into a high school, those that plan on continuing onto university must successfully navigate one final period of entrance examinations, those for university matriculation. These exams represent the final entrance exams that most students will take, and doing well and being admitted into a good university can ensure their future professional and social success. As a result, some students who do poorly will actually decline an offer to enrol in a lesser university so they can study intensely for a full year (without being enrolled in any school) and attempt the entrance exams again (Koyama et al., 2014). Once students have finished entrance exams and been admitted into a university, their motivation to study often declines significantly (Berwick & Ross, 1989). To use an analogy, studying for the high school entrance exams is like a roller coaster that has reached the top of a precipice, once those exams are finished, the motivation and effort for many will plunge.

L2 language attrition

If the studying intensity of students peaks in the final year of high school, with motivation and effort plunging once they enter university, a reasonable question would be to wonder if their L2 abilities will adopt a new downward trajectory. The increase of second language ability is referred to as second language acquisition, while the opposite, the decrease of second language ability is referred to as second language attrition. Just as with second language acquisition, second language attrition is highly dependent on contextual factors, yet there are some central hypothesises that frame much of the existing research in this area of inquiry. One of these is the regression hypothesis, which suggests that the first skills learned are the last to be lost (Wei, 2014), thus, because most people learn to read before they speak, attrition tends to occur with productive skills before receptive skills (Hanson, 1999; Wei, 2014). Some research has indicated that receptive skills may even increase while productive skills have started to atrophy (Edwards, 1976; Weltons, 1987). An additional hypothesis that suggests productive attrition would occur before reading attrition is the retrieval fail hypothesis, which suggests that forgetting a language can stem from the lack of visual stimuli (Wei, 2014). With reading, the letters, words, and paragraphs are omnipresent and can assist the reader in retrieving language, however, with the productive skills, language is generated by the learner; thus there is no pre-existing visual stimuli from which to rely on.

Tomiyama (1999) looks at L2 attrition within a Japanese context, and comes to several relevant conclusions. Chiefly among Tomiyama's conclusions is the assertion that L2 attrition , while generally similar, is not uniform, and can occur at different speeds, and target different areas of attrition, depending on the individual. The primary subject of her study, a Japanese elementary student named Ken, exhibited attrition first in the areas of fluency and lexical retrieval, while receptive comprehension remained strong throughout the 19-month period of the study. L2 attrition first started to appear at six months, which was consistent with existing research. Tomiyama notes that two other subjects in her study had L2 atrophy at a different pace, and interestingly, the two boys in her study developed a fluency atrophy compensation strategy of codeswitching, while the girl in her study developed a fluency atrophy compensation strategy of hesitations and pauses. However, it should be noted that the subjects in Tomiyama's study were relatively young, and returnees. Research on second language acquisition suggests that children are much more capable of learning a language than adults (Bialystock & Hakuta, 1999), which might suggest the opposite for attrition. Because adults struggle more when learning an L2, attrition might be more pronounced for them, as opposed to children who might possess a more stable understanding of an L2 because of their relative mastery during acquisition.

In another Japan-based study, Yoshitomi (1999) suggests less identifiable L2 attrition than Tomiyama (1999), however, she does provide explanations for this. Yoshitomi suggests that the four subjects of her study, also of elementary school age, did not exhibit significant L2 attrition in any of the subskills examined in her study, such as understanding of verb morphology, articles, and lexicon, after approximately one year. However, Yoshitomi contends that while the observable L2 attrition is light, there are two major caveats with this finding. The first is that even though L2 attrition may be minor in some linguistic subskills, the cumulative effect on fluency can be significant, both in terms of lacking linguistic skills and lacking confidence to engage in conversations for practice. Further, Yoshitomi suggests that assessment may not be accurately capturing L2 attrition in that many L2 learners develop compensation strategies in the face of their attrition, and these compensation strategies are not recognized as attrition. Yoshitomi cites examples such as an L2 learner who retrieves lexicon that might not be perfectly suitable for a situation, because they can no longer remember the most suitable lexicon, or a reticent speaker who is deemed a little shy rather than somebody who is refusing to participate because they recognize their own attrition. In these instances, attrition is masked through compensation strategies. Finally, Yoshitomi also suggests that the commonly agreed upon principle that productive skills atrophy before receptive skills may also be a victim of poor assessment.

Typically, the attrition of productive skills is due to a collective attrition in smaller linguistic sub-skills, and are easier to identify with assessment than receptive skills. However, Yoshitomi suggests that language skills are not isolated, and that productive and receptive skills are interrelated, so attrition in productive skills likely means a similar attrition in receptive skills. The poor assessment of receptive skills is reflected in the generally poor state of teaching listening in most language classrooms.

Teaching listening

Of the four language skills of reading, writing, listening, and speaking, listening involves the least explicit teaching. With reading, learners are taught to recognize familiar prefixes and suffixes, how to infer meaning from root words, and how to skim and scan text. With writing, learners are taught how to construct sentences, paragraphs, and essays. With speaking, learners practice using situational phrases for agreeing, disagreeing, clarifying, and other conversational necessities. However, with listening, more often than not, learners listen to a passage and are asked comprehension questions on what they just heard (Brown, 2011; Field, 2008; Goh, 2008; Siegel, 2014; Thorn, 2009). The focus is almost exclusively on the product of ability, rather than the process of learning. As Schmidt (2016) suggests, asking comprehension questions in a listening class is not the *teaching* of listening but rather the *assessment* of listening.

Rost (2014) suggests that there are three main components to listening, the affective domain, the cognitive domain, and the interpersonal domain. The affective domain largely deals with the willingness of the learner to make a connection with the L2 target culture, the cognitive domain largely deals with the learner's ability to recognize lapses in their listening skills and to not become derailed while actively engaged in listening, and the interpersonal domain largely deals with the learner's ability to navigate a personal interaction that requires them to listen. When viewing these three domains of listening through the context of a Japanese learner, it is important to note that these domains are not present in equal measure. In Japan, where there are few English-speaking students or residents (compared to other developed countries), the interactional domain has limited scope because there are simply fewer opportunities to interact. As a result, the affective and cognitive domains take on greater importance for L2 listening acquisition. With regard to the affective domain, the internet and the abundance of available English-speaking media have given teachers more opportunities for exposing students to the target culture and creating meaningful cultural connections. In fact, the use of authentic listening sources can have a motivating effect on learners (Mousavi & Iravani, 2012; Thorn, 2009). With regard to the cognitive domain, learners who can relearn auditory properties, and retrain themselves in strategies that compensate, approximate, reframe, skip, and substitute elements of what they have heard, should be able to improve their listening ability (Rost, 2014).

However, integrating these three domains of listening into a coherent and effective classroom strategy eludes many listening teachers. The cognitive domain, in particular, should be targeted by teachers. While it may be practically impossible to facilitate the interpersonal domain for Japanese students due to the lack of English-speaking interaction opportunities in Japan, and facilitating the affective domain requires establishing a meaningful connection with the target culture, which can be difficult to do given the grammar-focus of Japan's English classrooms, the cognitive focus would seem to lend itself to the bottom-up nature of grammar-based teaching that is omnipresent in Japan. Unfortunately, most listening practice, not only in Japan but around the world, is done with a top-down approach, focusing on comprehension rather than words and sounds (Ngo, 2016; Thorn, 2009). Bottom-up processing is an important element to improved listening ability (Field, 2003; Kiany & Shiramizu, 2007; Renandya & Farrell, 2011). Listening journals in which students focus on identifying the units of sentences, and reflect on their learning, can be an effective way of utilizing a bottom-up approach to teaching listening (Schmidt, 2016). Similarly, dictation can be modified in many ways to be more interesting (Mumford, 2016), yet neither approach is commonplace in language classrooms. While many teachers acknowledge the importance of listening and have a desire to employ teaching strategies that are informed by research and help students improve the process of listening, few are able to put into practice these beliefs and instead rely on the use of textbooks and assessment in listening classes (Graham, Santos, & Francis-Brophy, 2014, Karimi & Nazari, 2017; Ngo, 2016).

For those teachers that would like to construct listening activities that focus on the process of listening, rather than the product of listening, Chang, Wu, and Pang (2013) identify several of the main difficulties that learners face while listening. In their meta-analysis, as well as in their own research, Chang, Wu, and Pang report several difficulties faced by learners; speech rate, pronunciation, text type (such as a lecture or a conversation), hesitations, task type (such as local or global questions, multiple-choice questions, or comprehension questions), contextual support, background knowledge, and other factors. Their recommendations for tasks are that they align with learners interests in order to motivate them, that they offer contextual support (such as opportunities to repeat what they heard or to see visual images), that students are exposed to different types of listening texts (such as monologues and conversations, formal and informal), that students hear different types of accents and speech rates,

and that comprehension testing be minimized in order to remove anxiety from their listening experience (Chang, Wu, & Pang, 2013). In another study examining listening tasks, Hosogoshi (2016) demonstrated that when learners were given English captions to videos, there was no significant difference in comprehension with those that were not given captions. However, research by Chang and Millett (2014) suggests that reading a text while simultaneously listening to an audio recording of the text can help with listening comprehension, although it should be noted that the students in this research were beginner-level, which may account for the discrepancy with Hosogishi's (2016) findings.

Research Question

1.To what extent is student performance on an end-of-semester listening exam dependent upon the amount of authentic listening homework that they receive during a semester?

Participants

Participants were drawn from two English classes of equal proficiency, as determined by a TOEFL ITP placement test. Both classes were categorized as high-advanced, which meant that students had a TOEFL iBT score in the range of 65-80, with several students living abroad before enrolling at university. Students with experience living abroad, either short-term or long-term, represented approximately a fifth of all students in these classes, and experiences abroad occurred in a variety of countries, both English-speaking and non English-speaking. The two classes included 19 and 21 students, respectively. All 40 students involved in this study were in their first year at a major private university in central Tokyo. Students were majoring in intercultural communications and had eight class periods of English study, comprising four courses, per week. The students' four courses included a listening course, a speaking course, a reading & writing course, and one elective (usually a TOEFL or intercultural comparison course). Courses lasted a full year, with students receiving a spring semester grade and an autumn semester grade.

An additional 75 students also took the final exam, however, these students were in low-advanced classes, their TOEFL iBT score was in the range of 55-65, and they took an exam that was significantly different than the exam that the high-advanced students took. The high-advanced and low-advanced exams had 56 questions each with 26 shared questions. As a result, the results of the low-advanced exam were grouped with the results of the high-advanced exam in order to conduct a Rasch analysis (to obtain Rasch person measures across the entire advanced level). However, the low-advanced students were not included in this study.

Instrument

Data was collected at the end of the students' first semester, and again at the end of their second semester, via the final exam held for students at the end of each semester. Each exam consisted of 56 vocabulary and comprehension questions. Of the 56 questions, 14 were vocabulary questions which required students to match a word with the appropriate definition, 12 were comprehension questions based on two lectures from the teacher's version of the class textbook, and 30 were comprehension questions based on five lectures from online sources. All of the listening comprehension questions were multiple-choice questions with four distractors. Each exam took one hour to complete.

Person ability measures derived from the Rasch measurement model were calculated from the raw scores of each students on each exam. The first semester exam served as the pretest for this study, while the second semester exam served as the posttest. The resulting difference between the two exams in five variables (all items, listening items, non-textbook listening items, textbook-listening items, and vocabulary items) represented the effect of the treatment in the treatment group and the control group.

METHOD

Each class was taught by a native speaker of English who used the same textbook and followed the same weekly schedule of textbook progression. However, the homework given by each teacher differed. For the control group, the teacher assigned no listening homework and did all listening practice during class time. For the treatment group, the teacher assigned six "listening logs" and one mid-term listening assignment.

Each listening log required students to watch an episode of the CBS reality television show *The Amazing Race*. *The Amazing Race* is a television series that, as of this writing, has broadcast 29 seasons and been on CBS since 2001. Each year of broadcast includes two seasons, and each season is comprised of 12 or 13 episodes. Over the course of a season, 11 or 12 teams of two (usually close friends or family members) race to different locations around the world. Each episode involves the distribution of clues, the race to a new location, and the elimination of the last-place team from the competition. The one remaining team at the end of a season wins $1,000,000. While

students watched an episode of *The Amazing Race*, they would transcribe one A4 page of dialogue from the episode, as well as write one A4 page of reflection, consisting of four questions. These reflection questions included giving a summary of the episode, explaining the details of their listening (such as the location of their listening, duration of their listening, their comprehension, and their impression of the listening experience), listing five new vocabulary and three new phrases from the episode, and assessing their listening improvement in the course. Students usually took between two and three hours to complete a single listening log, with the first listening log of the first semester taking some students up to ten hours to complete, and the last listening log of the second semester taking most students 90 minutes to complete. Each of the six listening logs were assigned at intervals of two or three weeks, and students would have one week to complete each listening log. This study's use of *The Amazing Race* as the basis for a transcription activity was thought to accomplish many of Chang, Wu, and Pang's (2013) suggestions that stemmed from their research and their meta-analysis. *The Amazing Race* is a travel competition program and many of the students in this study were intercultural communications majors, which naturally oriented them towards travel and other cultures, watching episodes for homework provided the contextual support of repeat viewing opportunities and visual images to assist with comprehension, each episode offered several types of listening texts such as the narrator's monologue summary of the previous episode and the conversational banter between contestants, the variety of contestants involved in the program offered different accents and speech rates, and the activity did not involve testing so as to minimize the anxiety usually associated with comprehension testing. Also, using Hosogoshi's (2016) findings, it was decided that not providing students with English captions would be advantageous, since captions provided no significant increase in understanding, and that the presence of English text at the bottom of the video image could prevent students from fully relying upon their listening ability.

The mid-term listening assignment followed the same format as the listening logs, except students had to listen to an academic lecture (of their choice) rather than an episode of *The Amazing Race*. Students had to choose an academic lecture from TED.com, a website that hosts thousands of lectures of varying length on academic, scientific, and cultural topics, and complete a one-page transcription and answer four reflective questions, similar to their listening log homework.

Over the course of their second semester, the control group had no intensive listening homework assignments, while the treatment group had seven intensive listening homework assignments (six listening logs and a mid-term assignment).

RESULTS

Paired-sample t-tests were conducted to determine L2 listening proficiency changes after a semester of studying, as determined by a final exam, after assigning intensive listening homework (treatment group) and no listening homework (control group). The descriptive statistics for the treatment group's pretest and posttest Rasch person measure scores are shown in Table 1.

Table 1. *Rasch Person Measures for Treatment Group, Descriptive Statistics and Correlations in Exam Variables*
Note: *n=19; *p< 0.05*

	Spring semester			Autumn semester				
	M	*SD*	*Std. Error M*	*M*	*SD*	*Std. Error M*	*Corr.*	*p*
All items	1.10	.74	.17	.90	.64	.15	.80	.00*
All listening items	.64	.75	.17	.46	.65	.15	.81	.00*
Non-textbook listening items	.13	.71	.16	.14	.69	.16	.81	.00*
Textbook listening items	1.09	1.14	.26	1.23	.94	.22	.45	.05
Vocabulary items	3.61	1.13	.26	4.06	1.25	.29	.39	.10

Significant correlations were observed in three variables, *all items* ($r(18) = .80$, $p < .05$), *all listening items* ($r(18) = .81$, $p < .05$), and *non-textbook listening items* ($r(18) = .81$, $p < .05$). The results of the paired-sample t-test are shown in Table 2.

Table 2. *Paired-sample t-tests of Rasch Person Measures for Treatment Group, Mean Difference and Significance in Exam Variables*

	Paired differences							
				95% confidence interval				
	M diff.	*SD*	*Std. Error M*	*Lower*	*Upper*	*T*(18)	*P*	*H*
All items	1.10	.74	.10	-.02	.41	1.92	.07	.43
All listening items	.64	.75	.10	-.03	.39	1.78	.09	.21
Non-textbook listening items	-.01	.43	.10	-.22	.20	-.11	.91	-.02
Textbook listening items	1.09	1.14	.25	-.67	.39	-.55	.59	.53
Vocabulary items	3.61	1.13	.30	-1.08	.18	-1.49	.15	1.23

Note: *n=19; *p< 0.05; Morris (2008) used in calculation of effect size (H).*

No significant differences were observed between the treatment group's pretest Rasch person measure scores and the treatment group's posttest Rasch person measure scores. The descriptive statistics for the control group's pretest and posttest Rasch person measure scores are shown in Table 3.

Table 3. *Rasch Person Measures for Control Group, Descriptive Statistics and Correlations in Exam Variables*

	Spring semester			Autumn semester				
	M	*SD*	*Std. Error M*	*M*	*SD*	*Std. Error M*	*Corr.*	*p*
All items	1.02	.50	.11	.55	.55	.12	.37	.10
All listening items	.60	.52	.11	.29	.58	.13	.60	.00*
Non-textbook listening items	.04	.55	.12	.06	.58	.13	.52	.02*
Textbook listening items	1.27	1.15	.25	.80	.91	.20	.39	.08
Vocabulary items	3.29	1.36	.30	2.18	1.41	.31	.21	.37

Note: *n=21; *p< 0.05*

Significant correlations were observed in two variables, *all listening items* ($r(20) = .60$, $p < .05$), and *non-textbook listening items* ($r(22) = .52$, $p < .05$). The results of the paired-sample t-test are shown in Table 4.

Table 4. *Paired-samples t-tests of Rasch Person Measures for Control Group, Mean Difference and Significance in Exam Variables*

	Paired differences							
				95% confidence interval				
	M diff.	*SD*	*Std. Error M*	*Lower*	*Upper*	*T*(20)	*P*	*H*
All items	.47	.59	.13	.20	.74	3.61	.00*	.43
All listening items	.31	.49	.11	.09	.54	2.89	.01*	.21
Non-textbook listening items	-.01	.55	.12	-.26	.24	-.11	.92	-.02
Textbook listening items	.47	1.16	.25	-.06	1.00	1.86	.08	.53
Vocabulary items	1.10	1.74	.38	.31	1.90	2.90	.01*	1.23

Note: *n=21; *p< 0.05; Morris (2008) used in calculation of effect size (H).*

Three significant differences were observed with the control group, indicating that not giving listening homework during a semester resulted in the loss of L2 listening ability relative to other students in the department. The variables that exhibited a significant decrease between the pretest and posttest scores included *all items* ($t(20) = 3.61$, $p < .05$), *all listening items* ($t(20) = 2.89$, $p < .05$), and *vocabulary items* ($t(20) = 2.90$, $p < .05$).

DISCUSSION

While the results of the paired-sample t-tests indicated that the control group suffered from L2 listening ability attrition, it must be noted that the significant decrease in the control group's posttest exam scores were not raw scores. When conducting this analysis, the exam's raw scores were converted to Rasch person measures which are a measure of relative ability among all of the exam-takers. Also, if the posttest was more difficult than the

pretest, it is possible that the decreasing person measure does not represent L2 attrition. The control group may have maintained their L2 listening ability and just been faced with a more difficult test, resulting in the decreased Rasch person measure. However, the Rasch person measure does indicate that relative to the other students who took the exam, the ability of the control group decreased. This explanation would be consistent with previous findings that suggest that L2 language attrition tends to not occur as strongly with receptive skills such as reading and listening. Nevertheless, the Rasch person measure of the L2 listening ability of the control group did decline significantly in relation to their peers in the entire advanced-level. While the treatment group's L2 listening ability also declined relative to their peers in the entire advanced-level, it was not significant. While the L2 listening ability of both high-advanced classes decreased, only the control group's L2 listening ability decreased to a significant degree. To account for the decrease in relative ability by both groups, the L2 listening ability of the low-advanced students increased, likely as a result of the intensive nature of the L2 program at this university, and the tendency for advanced classes to use the same materials for high-advanced and low-advanced students.

It does appear that assigning intensive listening homework had a positive effect on the treatment group. The results of this study only offer a limited picture of how the treatment group may have benefited from the treatment, and it is likely that the intensive listening homework also had ancillary benefits on their other English skills, such as reading, writing, and speaking. By watching *The Amazing Race* and improving their recognition of native-speaker speech patterns (such as speech, rate, idiomatic language, pauses and hesitations, and accents), the treatment group may have been better able to initiate conversations with the international students in their program, international residents in their community, or engage in study-abroad and travel opportunities, which would likely further improve their speaking, and possibly their reading and writing. Without another measure to confirm this theory, it is difficult to say with certainty, but it seems likely that the TOEFL iBT scores for the treatment group would have improved across all language skills. Just through observation, it seemed that most of the students in the treatment group, more than the control group, were accepted into study-abroad programs in their second-year at university. This finding, however, has not been substantiated with data from the university. Connected to the possibility that intensive listening led to ancillary improvement in other skill areas, it is likely that the treatment group enjoyed affective benefits from watching *The Amazing Race*. As was mentioned earlier, students in this intercultural communication program tended to be interculturally-oriented, with a strong interest in meeting people from other cultures and travelling to different countries. The tendency of *The Amazing Race* to present global locales in an appealing way, as a travel documentary might, as well as creating a compelling narrative with the native-speaking contestants, probably increased the desire of many students in the treatment group to go abroad, travel to some of the countries featured in *The Amazing Race*, and meet like-minded native-speakers. Recalling Rost's (2014) domains of listening, the affective domain, in which L2 speakers create meaningful connections with the L1's culture, is one of the most crucial aspects to developing listening ability. After reading the responses to the reflection questions for each listening log assignment, it was clear that students were really attracted to many of the travel destinations depicted in the program. Many students indicated that they wanted to travel to the places on the show. Additionally, many students, if not all, had clear rooting interests for the contestants on the show, cheering for some to win and for others to be eliminated. It is rare for textbooks to elicit this kind of emotion, so it seems that the treatment group likely enjoyed affective benefits that the control group did not. Perhaps future research could add an affective survey to determine the extent of affective benefits that come with this type of intensive listening homework.

It was interesting that several students in the treatment group had a strong desire to see transcripts of the episodes that they had watched. One of the goals of this activity, besides the development of bottom-up processing skills and the establishment of meaningful connections with the target culture, was to simulate the experience of real-time conversations, that is, to listen and not be entirely certain of what is being said. Obviously when somebody is engaged in a conversation, they d not have the option of stopping the conversation and looking at a transcript to confirm understanding. It was thought that not having access to a transcript would develop the students' tolerance for ambiguity, and that increased tolerance of ambiguity could lead to linguistic and affective gains (Dewaele & Wei, 2013).

On a purely qualitative basis, using *The Amazing Race* as the basis for an intensive listening activity was successful. Students spent a significant amount of time practicing their listening and completing the transcription and reflection portions of the assignment, yet they never seemed to burn out from the activity. From this researcher's experience, teachers need to be cognizant of how much homework they can assign to students before they become overwhelmed or demotivated. For most students, the first listening log took between 5-10 hours to complete, however, the effort of students did not wane in subsequent listening logs. The length and detail of transcripts was constant throughout the course, and responses to reflection questions remained thoughtful through all seven listening assignments in the second semester (as well as the seven listening assignments in the first semester).

It seems that the cultural closeness of this activity and the narrative constructed within the show had a powerfully motivating effect on students, which was consistent with research that suggested authentic materials can provide motivational benefits, and should be used whenever possible (Mousavi & Iravani, 2012; Ngo, 2016; Thorn, 2009). It seems unlikely that using materials from the textbook as the basis for intensive listening activities would have held the same sway over students for an entire semester (or two semesters!), although this would need to be confirmed with an affective survey. With the internet making music, magazines, movies, television, newspapers, and other cultural artifacts readily available to teachers, modifying L2 listening activities to include authentic materials should be a guiding tenet of listening teachers and textbook publishers.

Limitations

While the results of this study offer an insight into how L2 listening attrition can occur over just a single semester, there are several limitations to this study that readers must be aware of. First, the characterization of L2 listening attrition in this study is relative not absolute. While the exam scores for the control group decreased significantly, this does not necessarily mean that absolute L2 listening ability decreased. If the pretest was easy and the posttest was difficult, it is possible that absolute L2 listening ability actually increased for the control group but is hidden by the discrepancy in the difficulty levels of the two exams. The significant decreases in L2 listening ability observed in this study are relative to other students within the advanced level of the program. The Rasch mathematical model calculates a person ability measure by incorprating the performance of all of the exam's respondents into a predictive model, so relative to other students in the advanced level, the control group's ability declined, yet this does not necessarily mean in an absolute sense. Second, as mentioned in the discussion, the listening exam used as the pretest and posttest of this study only gives a limited view of L2 proficiency. The intensive bottom-up processing involved with transcriptions likely gave the treatment group additional L2 development benefits, such as greater confidence in listening to native speakers which might have led to increased conversation practice (and improved speaking ability) or incidental vocabulary acquisition (and improved reading ability). Utilizing additional sources of proficiency data, such as TOEFL scores, would give a more complete picture of L2 acquisition stemming from intensive listening homework. Third, the scope of this research study, involving only 40 students over a single semester, was limited. Statistical results would be more reliable with more participants. Moreover, most research has tended to show that L2 attrition generally does not become apparent until after six months, thus a longer timeline for this study might have revealed more pronounced decreases in L2 listening attrition.

CONCLUSION

The adage *use it or lose it* holds true for many aspects of life, from maintaining physical fitness to cognitive acuity. It has been suggested that receptive skills are more insulated for L2 attrition than productive skills, however this study demonstrated that L2 listening attrition, in a relative sense, can occur after just a single semester. It is essential for teachers to prevent this by adopting more progressive strategies for teaching listening. Simply relying on in-class checks of comprehension, and not utilizing outside authentic materials for homework, can have a detrimental effect on students. Luckily, with the increasing connectivity enjoyed around the world, there has never been a greater abundance of authentic materials available to teachers to incorporate into their lessons and to help their students build their L2 skills.

REFERENCES

Berwick, R. & Ross, S. (1989). Motivation after matriculation: Are Japanese learners of English still alive after exam hell? *JALT Journal, 11*(2), 193-210.

Bialystock, E. & Hakuta, K. (1999). Confounded Age: Linguistic and Cognitive Factors in Age Differences for Second Language Acquisition. In D. Birdsong (Ed.), *Second Language Acquisition and the Critical Period Hypothesis*. Lawrence Erlbaum Associates: Mahwah, New Jersey.

Brown, S. (2011). *Listening myths: Applying second language research to classroom teaching*. Ann Arbor: University of Michigan Press.

Chang, C-S. & Millett, S. (2014). The effect of extensive listening on developing L2 listening fluency: Some hard evidence. *ELT Journal Volume, 68*(1), .31-40. doi:10.1093/elt/cct052

Chang, C-S., Wu, W-P., & Pang, C-L. (2013). Second language listening difficulties perceived by low-level learners. *Perceptual & Motor Skills: Learning & Memory, 116*(2), 415-434. doi: 10.2466/22.23.PMS.116.2.415-434

Dewaele, J.-M., & Wei, L. (2013). Is multilingualism linked a higher tolerance of ambiguity? Bilingualism: *Language and Cognition, 16*, 231–240. doi:10.1017/s1366728912000570

Edwards, G. (1976). Second language retention in the Canadian public service. *The Canadian Modern Language Review, 32*, 305-308.

Field, J. (2003). Promoting perception: Lexical segmentation in L2 listening. *ELT Journal, 57*(4), 325–334. doi:10.1093/elt/57.4.325

Field, J. (2008). *Listening in the language classroom*. Cambridge: Cambridge University Press.

Goh, C. (2008). Metacognitive instruction for second language listening development: theory, practice and research implications. *RELC Journal, 39*, 188-213. doi:http://dx.doi.org/10.1177/0033688208092184.

Graham, S., Santos, D., & Francis-Brophy, E., (2014). *Teacher beliefs about listening in a foreign language. Teaching and Teacher Education, 40*, 44-60. doi: https://doi.org/10.1016/j.tate.2014.01.007

Hosogoshi, K. (2016). Effects of captions and subtitles on the listening process: Insights from EFL learners' listening strategies. *JALT CALL Journal, 12*(3), 153–178

Karimi, M. & Nazari, M. (2017). The Congruity/Incongruity of EFL Teachers' Beliefs about Listening Instruction and their Listening Instructional Practices. *Australian Journal of Teacher Education, 42*(2). doi:http://dx.doi.org/10.14221/ajte.2017v42n2.5

Kiany, G. R. & Shiramiry, E. (2002). The effect of frequent dictation on the listening comprehension ability of elementary EFL learners. *TESL Canada Journal 20*(1): 57–63. doi: https://doi.org/10.18806/tesl.v20i1.938

Koyama, A., Matsushita, M., Ushijima, H., Jono, T., & Ikeda, M. (2014). Association between depression, examination-related. stressors, and sense of coherence: The ronin-sei study. *Psychiatry and Clinical Neurosciences, 68*, 441–447. doi:10.1111/pcn.12146

Mawer, K. (2015). Casting new light on shadow education: Snapshots of juku variety. *Contemporary Japan 2015, 27*(2), 131–148. doi:10.1515/cj-2015-0008

Mori, I. & Baker, D. (2010). The origin of universal shadow education: what the supplemental education phenomenon tells us about the postmodern institution of education. *Asia Pacific Educational Review, 11*, 36-48. doi:10.1007/s12564-009-9057-5

Morris, S. B. (2008). Estimating effect sizes from pretest-posttest-control group designs. *Organizational Research Methods, 11(2)*, 364-386. http://doi.org/10.1177/1094428106291059

Mousavi, S. A. & Iravani, H. (2012). The effect of authentic versus non-authentic aural materials on EFL learners' listening comprehension. *English Language and Literature Studies, 2*(1), 21–27. doi:10.5539/ells.v2n1p21

Mumford, S. (2016). *Intensive listening; Some possibilities*. Retrieved from www.modernenglishteacher.com

Ngo, N. T. H., (2016). The Impact of Listening Strategy Instruction on Listening Comprehension: A Study in an English as a Foreign Language Context. *Electronic Journal of Foreign Language Teaching, 13*(2), 245–259.

Renandya, W. A. & Farrell, T. S. C. (2011). "Teacher, the tape is too fast!" Extensive listening in ELT. *ELT Journal 65*(1), 52–59.

Schmidt, A. (2016). Listening journals for extensive and intensive listening practice. English Teaching Forum.

Siegel, J. (2014). Exploring L2 listening instruction: examinations of practice. *ELT Journal, 68*(1), 22–30. doi:0.1093/elt/cct058

Thorn, S. (2009). Mining listening texts. *Modern English Teacher 18*(2): 5–13.

Tomiyama, M. (1999). The First Stage of Second Language Attrition: A Case Study of a Japanese Returnee. In L. Hansen (Ed.), *Second Language Attrition in Japanese Contexts*. New York: Oxford University Press.

Wei, J. (2014). Selectivity of second language attrition. *Theory and Practice in Language Studies, 4*(8), 1603-1608. doi:10.4304/tpls.4.8.1603-1608

Weltens,B. (1987). The attrition of foreign-language skills: a literature review. *Applied Linguistics, 8*, 22-36.

Yoshitomi, A. (1999). On the Loss of English as a Second Language by Japanese Returnee Children. In L. Hansen (Ed.), *Second Language Attrition in Japanese Contexts*. New York: Oxford University Press.

USING TWO-TIER TEST TO ASSESS THE FOURTH YEAR STUDENTS′ LEARNING AND ALTERNATIVE CONCEPTIONS IN ACID-BASE

Masoumeh Ghalkhani[1], Ansar Mirzaei
Department of Chemistry, Faculty of Science, Shahid Rajaee Teacher Training University, P.O. Box 167855-163, Tehran, Iran
ghalkhani@gmail.com & ghalkhani@srttu.edu & hardon1364@gmail.com

ABSTRACT
Since the chemistry concepts are complex and abstract, thought of by students as complex as understanding, identifying and investigation of misconceptions is important because misconceptions is considered as one of the preventives to perpetual and meaningful students′ understanding. The purpose of the present study was to identify and assessing the fourth year students' misconceptions of acid–base chemistry in high schools of Marivan using a two-tier multiple choice diagnostic instrument. In pilot study, a test with 30 multiple-choice diagnostic questions was written concerning to the goal-content's table according to Bloom s taxonomy. Thirty participants were selected by using attainable sampling the high school fourth year students in Marivan city. With attention to the obtained amount of Cronbakh's Alpha (α=0.74), it was specified that designed questions verified with mentioned instructional objectives of goal-content' s table. With using Difficulty Coefficient, Distinction Coefficient and Internal Consistency coefficients, 12 unfit questions deleted and 18 questions remained. The main test was run on 120 students who were chosen by attainable sampling in the high school fourth year students in Marivan city. Data were analysed with use of descriptive statistics examinations (frequency, percent, average and standard deviation) and χ^2. Results showed that students had misconceptions in acid and base chemistry concepts: acid–base theories application, acid-base reactions, conjugate acid–base pairs, monoprotic and polyprotic acids, strong and weak acids/bases, pH and pOH concepts, ionization constant and kind of salts. Notably, no significant difference in the amount of misconceptions was found between the experimental and mathematical branches.
Keywords: Acid, Base, Chemistry, Misconceptions, Students, Two-Tier Test

INTRODUCTION:

Sometimes the concepts that students can perceive are not able to explain properly scientific phenomena and finally deviate from scientific phenomena. These differences between the student's points of view and the accepted scientific theories which prevent the students from meaningful and permanent learning is named misconception. In other sources, misconception is named as alternative conception, naïve belief, previous idea and etc. Researches have shown that students' previous experience, their prior knowledge, the surrounding environment and the global theory effect on the interpretation of their observations and even concepts that make. Therefore, it is possible that students come to class with misconceptions about subject taught (Çetingul, 2005). Misconceptions much impact on students learning with prevention of acquisition of the new scientific concepts.

The first step for preventing misconceptions is the recognition of the students' misconception. For misconception recognition, various discreteness tools have been developed and are used. Interviews, multiple choice exams, concept maps and multiple part exams can be listed as the discernments tools for misconception finding in science education field. Between these tools, interview has benefits such as: more flexibility and encompassing deeper information and also has disadvantage of limitation of the number of participants. Also, concept mat needs spend time for student and teacher training, scoring and interpretation of results. Although multiple chose exam can be performed for a large group but it is unable of deep probing of the students' response. For example, it occurs very much that students with wrong ratiocination correctly answer.

To compensate the limitations of these tools, researchers designed double and triple questions by improving the multiple questions. By using these developed tests for misconceptions identification researchers can gain valuable information about people misconceptions and discriminate between misconceptions and mistakes and lack of knowledge (Kaltakci & Erylmaz, 2007)

[1]Corresponding Author. Tel.: +98-2122970005; fax: +98-2122970005.
E-mail address: ghalkhani@srttu.edu

Employing two steps multiple choice exams has doubled benefit provided teachers are aware of the students' learning of the intended subject, their thought process and also their imagery (Kao, 2007).

Many studies on student's misconception about chemistry of acids and bases have been done. Demircioglu and Ayas, 2005, believe that acid-base chemistry has been known as a difficult concept in high school. Misconceptions that students have in this topic are because the acid-base chemistry learning includes understanding of many topics such as: general chemistry, chemical equilibrium, chemical reactions, stoichiometry, the nature of matter and solutions.

In recently performed researches by Drechsle and Schmidt (2005) and Furio-Mas et al. (2007), some misconceptions and alternative concepts were reported about chemistry of acid-base between the students. Some common misconceptions of acid- base chemistry are observed on topics such as: pH, conjugate acid-base pair, salts, titration, neutralization and buffer solutions (Demircioglu et al., 2005; Sheppard, 2006).

Considering the high risk of the students' misconceptions of scientific concepts and its bad effect that influences the continuity of learning at higher levels, in new educational methods diagnostic of the common students' false conceptions and misconceptions and try for its correction is very important. Finding of this project is important because it is going with investigation of the students' comments evaluate their common misconceptions related to acid-base and offer strategies for conceptual change and correction of these types of misconceptions.

METHODOLOGY

The aim of this project was to identify students' achievements and misconceptions in acid-base topic. Therefore, the study was done as a survey model. The study was performed with descriptive-analytic method. For this purpose, at first in the pilot study, a preliminary questionnaire containing 30 multiple-choice diagnostic questions was written concerning to the goal-content's table according to Bloom s taxonomy. Then prepared questionnaire was presented to 30 high school fourth year students, so they must answer to the question within a specified time. Notably, negative score was not included for questions to easily and without any stress students answer them. Questions were related to the third section of the fourth year of high school textbook in acid-base chemistry topics. It includes concepts such as: acid-base theory, pH concept, pOH and related subjects to it, single-protic and polyprotic acids, ionization constant, acid-base power, acid-base reactions and acidic and basic salts. In order to validate the questionnaire, it was administrated to 5 high school expert chemistry teachers of Marivan city-Kurdistan Province and 10 chemistry teachers which were chemical education master students at Shahid Rajaee Teacher Training University (SRTTU) and also science education professors of SRTTU and their evaluations was collected. Then, average scores of each question were calculated. Regarding to obtained average scores of the each question and average scores of the total questions which were greater than 3 (average amount), validity of the questionnaire was confirmed.

After evaluation and calculation of the difficulty and discrimination indexes, 12 questions were omitted and 18 questions remained. The main two-tier diagnostic test was run on 120 students who were chosen by attainable sampling in the high school fourth year students in Marivan - Kurdistan Province. Each question contained 2 sections. First part was included multiple-choice questions employed in preliminary exam in which one option was the correct answer and the others were incorrect. Second part was multiple choice tests and it has been prepared so that the students should select one choice regarding the reason they chose the particular option in the first part. Notably, in the send section of each question one option was correct and others targeting the students' misconceptions which undoubtedly they were incorrect. This research was conducted in the 2016-2017 academic year with 120 participations, chosen by attainable sampling; of the high school fourth year students of the Marivan city attended to the boys government gifted Farzanegan and girls talented high schools who studied the experimental science and mathematics and physics fields. For simplicity of the data analysis was performed using SPSS software which by using that the absolute and relative frequency of the students for various options of the questions was obtained. Statistical characteristics related to holding exam have been shown in table 1.

RESULTS AND DISCUSSION

Data were analysed with use of descriptive statistics examinations (frequency, percent, average and standard deviation) and χ^2.

Table 1. Statistical characteristics related to multiple-chose exam of the acid-base concept

Exam Type	Studied city	Total Questions	Total students	Gender		Educational field study	
				Girls	Boys	Mathematics and physics	Experimental science
Preliminary	Marivan	30	30	17	13	13	17
Main (to tier)	Marivan	18	120	80	40	80	40

The evaluation of the students' response to the two-tier multiple- choice exam was performed by Bayrak (2013) classification method. To accomplish this ail, both sections of the question including response for first part and reasoning for the second part were considered. Classification was as follow:

1- Sound understanding (SU): for each question both of the response and its argument is correct.
2- Partial understanding (PU): for each question only one part is correct. Correct response or correct argument.
3- Partial understanding with Specific alternative conception (PS): includes correct response with false reasoning or correct argument with false responses.
4- Specific Alternative conception (SA): both response and arguments are incorrect.
5- No understanding (NU): leave empty options or selecting more than one option for each section of question.

This classification enables the researchers to obtain information based on two important points of view (Romklao et al., 2010).

Students' answers to the options on the conceptual understanding scale were scored based on the assessment criteria stated in Table 2.

Table 2. Assessment criteria

The degree of concept learning	Assessment criteria
0 point	No answer
0 point	Marked multiple choices
1 point	Only one correct answer
2 point	Two correct answers

Table 3. The percentages of the students' response according to the Çhalik and Ayas classification

Concept	Students responses (percentage value)									
	SU		PU		PS		SA		NU	
	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy
Application of acid-base theories										
Q 1	27.1	33.3	0	5.6	0	0	62.5	51.4	10.4	9.7
Q 2	35.4	23.6	0	2.8	0	0	56.3	63.9	8.3	9.7
Q 3	33.3	40.2	0	1.4	14.6	16.7	43.8	37.5	8.3	4.2
Single-protic and polyprotic acids										
Q4	35.4	25	0	0	12.5	8.3	45.8	59.8	6.3	6.9
Q11	25	18	0	1.4	10.4	5.6	54.2	69.4	10.4	5.6
pH and pOH										
Q5	41.7	30.6	0	0	12.5	5.6	43.7	61.1	2.1	2.7
Q8	18.7	29.2	0	0	2.1	5.6	72.9	56.9	6.3	8.3
Q9	12.5	26.4	0	0	6.3	5.6	81.2	68	0	0
Q10	16.7	29.2	0	4.2	29.2	13.9	45.8	45.8	8.3	6.9
Conjugated acid-										

base pair										
Q6	31.2	36.1	0	0	22.9	15.3	39.6	47.2	6.3	1.4
Acid-base power										
Q7	20.8	12.5	0	0	22.9	15.3	43.8	62.5	12.5	9.7
Q12	39.6	27.8	6.3	5.6	2.1	0	33.3	41.6	18.7	25
Q14	20.8	30.6	0	0	0	0	66.7	48.6	12.5	20.8
Q16	29.2	47.3	4.2	0	10.4	8.3	47.9	37.5	8.3	6.9
Q18	35.4	30.6	0	0	6.3	4.2	47.9	58.3	10.4	6.9
Acid-base reaction										
Q13	20.8	27.8	0	1.4	18.8	27.8	50	23.6	10.4	19.4
Q15	14.6	29.2	0	2.8	12.5	11.1	56.2	45.8	16.7	11.1
Ionization constant										
Q17	22.9	38.9	0	4.3	8.3	2.8	64.6	43	4.2	11.1

Regarding to table 3, it is obvious that almost in all evaluated subjects misconceptions are observed in both gender (boy and girl students). Tsai proposed that if the total percent of misconceptions in a subject is more than 10 %, such a subject should be evaluated (Tsai et al., 2007).

Questions 1 -3 evaluate the students learning about application of the acid-base theory. In question 1, 60 % of the boy students and 50 % of girl students believed that every chemical formula containing OH in its structure is a base. That is not correct in all situation as there is an OH in the phenol (C_6H_5OH) structure but carbon electro-negativity is not enough to obtain electron from oxygen and release its OH, while most of the students did not know that.

Questions 2: in question 2 the structural formula of the boric acid (H_3BO_3) had been given in which hydrogen atoms connected to the oxygen. 32.5 % of the boy students and 43 % of the girl students incorrectly selected it as base.

Even though higher percentage of the students were able to select the correct response but obtained results shows that students do not enough contemplate and do not use their previous experience and learning or indeed they do not take the help of their prior knowledge about the property of electro-negativity of the elements.

Question 3: Arrhenius acid-base theory of oxy-acids has been questioned. As it is obvious from table 3, 20 % of boy students and 40 % of girl students mistakenly thought that all of the nonmetal oxides are acid. But some of the nonmetal oxides are neutral oxides (not acids!!!) such as CO, NO, N_2O and they are molecularly dissolved in water. Meantime, nonmetal oxides do not have H^+ in their structure that they can to release it while they produce it and this mistake is obvious in 35 % of the boy students' response and 13 % of the girls.

Questions 4 and 11: These questions aimed at the identification of the polyprotic acids from single protic ones. 37.5 % of the boy students and 17 % of the girl students only look at the formula appearance and they chose false option with misconception. Most of the students believed that hypophosphorous acid (H_3PO_2) is a polyprotic acid and can donate three protons to water molecule. In deed this acid despite having 3 protons but only has one detachable proton and is single proton acid. As a result, for identifying multiprotoic acid the number of the detachable protons is important not the number of H in structural formula. Also, 55 % of the boy students and 54 % of the girl students believed that basic species such as OH^- do not presence in acidic solutions and do not attend to aqueousity of the acidic solution and presence of hydroxide ion produced from ionization water.

Questions 5 and 8: have been stated about pH and pOH concepts that 13 % of boy students and 27 % of girl students considered the pH and pOH as a measure of the acidic and basic environment, respectively, and this is due to the same wrong idea of the acid-base definition in their mind. Furthermore, acidic power is only one of the factors that effect on pH amount and most students were neglected acid concentration and results show that 55 % of boys and 60 % of girls unable to correctly answer to the question 8.

Question 6: Plans specify conjugate acid-base pairs in following reaction,

$$NH_{3\,(aq)} + HPO_4^{2-}{}_{(aq)} \rightleftarrows NH_4^{+}{}_{(aq)} + PO_4^{3-}{}_{(aq)}$$

Students should diagnose that compounds or ions are considered conjugate acid-base that one of them to be proton donor while another is proton acceptor. Such as: HPO_4^{2-} and PO_4^{3-} or NH_3 and NH_4^+. Results show that both group of students, boys and girls, did not correctly learn this concept. About 33 % of boys and 17 % of girls was unable to identify conjugate acid-base pairs and truly argue their option. Most of them had such a misconception that considered conjugate acid-base pairs containing positively and negatively charged ions which can neutralize each other.

Question 7: Here basic power of some compounds is measured. About 27 % of boy students and 20 % of girl students incorrectly answered the both section of the question. They thought that power of bases is related to their solubility in water and also to the number of the OH group in their structures. For example, they considered $Mg(OH)_2$ stronger base than RbOH. While the power of an acid or base depends on its dissociation and ionization in water.

Question 9: it shows the pH definiation using its famus relation as $-\log[H^+]$. Here, 40 % of boy students and 50 % os girl students used this relation, unaware that in very low concentration this relation is not correct and H_3O^+ ion concentration genereted from self ionization of water should be added which lower the solution pH. Teaching method of teachers and permanent use of this equation for solving the sample questions without taking sides, have high impact on students' learning and understanidng.

Question 10: this question targeted the effect of temperature on pH but unfortunately the percentage of the correct answers to this question was very low that shows low learning level in this subject.

Question 12: Evaluated the properties of the hydrohalic acids considering their power. Students have a general idea about acids and bases in their mind and they always include the point that acids are sour and bases are bitter in their definition.

Question 13 and 15: It has been propound about acid-base reactions. About a quarter of girl and boy students in responding to question 13 have considered their learning in relation to salt definition in second and third year of high school in which salt has been defined as a compound that is product of the acid and base reaction or natural compound having equal charges of cations and anions. May be these definition be considered right in their own place. However, apart from natural salts that are widely used in our lives, we also have acidic and basic salts in nature while students do not look at the subject with a comprehensive view but they suffice to their partial information. Question 15 has propounded the esterification reaction. Ester and water are produced from the reaction of a carbocyclic acid and an alcohol in which proton (H) of the produced H_2O is supplied by alcohol and OH by acid. About 53 % of boy students and 50 % of girl students were unable to find the correct answer. Functional group of alcohols and acids is as R-OH and R-COOH, respectively. Probably, students answered to this question regarding to functional groups and jumbled topics.

Question 14: It asked ionization steps of a multropotic acid. Phosphoric acid (H_3PO_4) is a three protonated acid which has three dissociation steps and loses one proton in each step. Students thought multropotic acids are strong acids and do not know that these acids cannot completely dissociate and they do not change much in practice. 25 % of boy students and 40 % girl students had clear misconception in this subject.

Question 17: The students were asked to show as chart the K_w change of an aqueous solution based on $H_3O^+(aq)$ concentration at constant temperature. The highest percentage which shows lack of learning of the students is related to question 14 and about 8 % of boy students and 7 % of girl students did not have any comment on this question. In this question, the lack of relation between learning levels of macroscopic, microscopic and symbolic can be considered important factor in the lack of learning. Some of the students were unable to describe the existing sentences in the textbook in the form of chart.

Questions 16 and 18:
These questions asked students to specify the order of the acid-base strength of several various substituted compounds. 40 % of boy students and 34 % of girl students had misconception about question 16. Some of the students considered the alkyl groups as electron acceptor. Some others were not aware of relation between basic strength and K_b. Question 18 had almost similar situation with question 16. 33 % of boy students and 34 % of girl students had clear misconception in this question. Presence of halogens increases the acidic strength and conversely,

increasing the number of carbon reduced the acid strength. From the students response it seems that they were confused in this question and they took wrong the acidic strength with basic strength.

Finally, some students' misconceptions related to questions of acid- base concept were detected as below:

- Every chemical formula having OH represents a base.
- Every nonmetal oxide is Arrhenius acid (oxy-acid).
- Every compound with any number of H in its structure can release all of them.
- pH is a measure of the acidity of the environment and pOH is a measure of the basicity of the environment.
- The conjugate acid-base pair includes ions with positive and negative charge which can neutral each other.
- Strong acids are sourer, more caustic and have strong bond between their molecules compared to weak acids.
- When the pH increases, acidic strength enhances.
- pH of the hydrochloric acid solution (HCl) with 10^{-8} M concentration is equal to 8.
- Equilibrium systems, including acidic and basic solutions are not affected by temperature and pH=7 is the characterization of the neutral aqueous solution.
- All salt are neutral or salts that are reaction result of a strong acid and a weak base are considered as neutral salts.

CONCLUSION

In total, present research findings showed that the high school fourth year students have high misconceptions in case of acid-base chemistry concept. They cannot to have clear and accurate understanding of the intended concept. Various factors can be introduced as the origin of such misconceptions. Pre-learning of the students in previous years, abstract concepts, complexity of chemical content and disproportion of the presented scientific content with the level of the students' cognitive development, inappropriate organization of educational content without observing prerequisite, appropriate longitudinal and transverse links, inappropriate analog simulation use by teachers, lack of laboratory work and discussion, lack of connection between the three levels of learning: sensory (macroscopic), atomic and molecular (microscopic) and symbolic (formulas and algorithms), inappropriate teaching methods and instill concepts by teachers, all of them are considered as the genesis misconceptions in students. Investigating the source of misconceptions and ways of correcting them requires a separate research. When planning and writing textbooks, all the challenging concepts and prone to misconceptions in students should be examined. The use of diagnostic and genetic assessments and teachers' awareness of the views and opinions of students toward challenging concepts, towards helps to adopt appropriate teaching methods. The findings of this study can help to course planners, the authors of the chemistry and science textbooks of the middle school and also chemistry teachers proceed to improve the quality of teaching process - learning the concepts related to acid-base chemistry.

REFERENCES

Bayrak, B.K., (2013) Using Two-tier test to identify primary students' conceptual understanding and alternative conceptions in acid base, *Mevlana International Journal of Education*, 3(2), 19-26.

Çetingul, P.I, & Geban, O. (2005). Understanding of acid-base concept by using conceptual change approach, *Hacettepe University Journal of Education*, 29, 69-74.

Demircioglu, G., Ayas, A., & Demircioglu, H., 2005. Conceptual change achieved through a new teaching program on acids and bases. *Chemistry Education Research and Practice*, 6, 36-51.

Drechsle, M., & Schmidt, H-J., (2005). Textbooks' and teachers' understanding of acid- base models usedin chemistry teaching. *Chemistry Education Research and Practice*, 6, 19-35.

Furió-Más, C., Calatayud, M.L., & Bárcenas, S.L., (2007). Surveying students' conceptual and procedural knowledge of acid-base behavior of substances. *Journal of Chemical Education*, 84, 1717-24.

Kaltakci, D., & Erylmaz, A. (2007). Identifying pre-service physics teachers' misconceptions with three tiertests. *Department of Secondary Science/Math. Education, Kocaeli University, Kocaeli, Turkey.*

Kao, H-L., (2007). A study of aboriginal and urban junior high school students' alternative conceptions on the definition of respiration. *International Journal of Science Education*, 29, 517-33.

Muammer, Ç., & Alipaşa A., (2005). A cross-age study on the understanding of chemical solutions and their components, *The* International Education Journal, 6(1), 30-41.

Romklao A., Thasaneeya R., Richard Kevin C., & Tienthong T., (2010). Thai Grade 11 students' alternative conceptions for acid–base chemistry. *Science & Technological Education*. 28 (2), 167-183.

Sheppard, K. (2006). High school students' understanding of titrations and related acid-base phenomena. *Chemistry Education Research and Practice*, 7, 32–45.

Tsai, C-H., Chen H-Y., Chou C-Y., & Lain K-D., (2007). Current as the key concept of Taiwanesestudents' understandings of electric circuits. *International Journal of Science Education*, 29, 483–96.

