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

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Message from the Editor-in-Chief

Hello from TOJNED

TOJNED welcomes you.

We are very pleased to publish volume 5 issue 3 in 2015. As an editor-in-chief of The Online Journal of New Horizons in Education (TOJNED), this issue is the success of the reviewers, editorial board and the researchers. In this respect, I would like to thank to all reviewers, researchers and the editorial road.

This issue covers different research scopes, approaches which subjects about new developments and innovation in education by valuable researchers. I and The Online Journal of New Horizons in Education (TOJNED) editorial team will be pleased to share various researches with this issue as it is the miracle of our journal. All authors can submit their manuscripts to tojned@gmail.com for the next issues.

TOJNED will organize ITEC-2015 (www.ite-c..net) International Teacher Education Conference between September 02-04, 2015 in Russia. This conference is now a well-known teacher education event. It promotes the development and dissemination of theoretical knowledge, conceptual research, and professional knowledge through conference activities. Its focus is to create and disseminate knowledge about teacher education. ITEC-2014 conference book has been published at http://www.ite-c.net/itecpubs

Call for Papers

TOJNED invites you article contributions. Submitted articles should be about all aspects of teacher education. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJNED.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 it'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.

July 01, 2015
Editor in Chief
Prof. Dr. Aytekin İŞMAN

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A STUDY ON ORGANIZATION FOR FUTURE UNIVERSITIES

Asst. Prof. Dr. Ergun Demirel

Piri Reis University, Tuzla Istanbul/Turkey

edemirel@pirireis.edu.tr

Abstract: The role, vision, mission, objectives and tasks of universities are changing to meet the new requirements of society in the 21st century. Although education is the primary mission of universities, application of science and technology in support of businesses and industries has become quite important as well. The innovation which is the driving element of the economy also shapes the structure of the universities.

Although some major changes have been made in the organization and management systems of the universities in the last quarter of the 20th century, most of the universities are still insistent to keep their orthodox structure.

This study aims to investigate possible organization and management systems approaches to balance the education functions of the universities with other challenging missions in particular the research activities in support of the economy and society.

Key Words: Future University; Organizations for University; Management Systems for the Universities; Innovation and University; The role and mission of the universities

INTRODUCTION

The world is changing rapidly. The high technology makes the world such a small town which everyone may reach the others easily. The new world order has also changed the requirements and expectations of society. This new situation started to affect strongly the social life, economy, politics and technology. The role, vision, mission, objectives and tasks of all institutions are also changing to meet the new requirements of society in the 21st century. The 19th and 20th centuries were the "invention era" but the 21st century will probably be called as the "innovation era". Innovation needs continuous changes and challenges, and it needs more dynamic improvements in all fields of life to be successful in a challenging world.

The education systems are also changing. The primary and secondary education system is not compatible with the 20th century. The tertiary education institutions, universities are also in a transition period to adopt themselves for new expectations. Although education is the primary mission of universities, application of science and technology in support of business and industry has also become quite important. The innovation which is the driving element of the economy also shapes the stricter of the universities.

Although some major changes have been made in the organization and management systems of the universities in the last quarter of the 20th century, most of the universities are still insistent to keep their orthodox structure.

The number of the research centres and institutes is now more than academic units on the organization charts of the most universities. Universities are now playing a major role to support technological improvement of society.

The university is now an important element of the economy. In order to survive in today's competitive environment of the economy, the business and industry need more support from universities. Today the cooperation between university and industry is a vital issue for both parties and they are reorganizing themselves to create better opportunities in the challenging global economy.

Ernst & Young's made a study on view is that the higher education sector in Australia. This study covers undergoing a fundamental transformation of the universities in terms of its role
in society, mode of operation, and economic structure and value. To explore these themes and future directions, they conducted an industry-wide study of the main forces impacting
the higher education industry globally and locally, and the opportunities, challenges and implications for Australian universities (Ernst & Young, 2012).

Today universities should improve a Strategic Plan and the following questions need to be answered to achieve that;

- Is our current model going to be successful in the future or needs proof
- Can our organisation survive and thrive in its current business model and mode of operation?
- Where to play?
- What student, industry or other customer segments should we focus on?
- What will be our point of difference and how do we sustain this?
- How to play?
- Who should we partner with?
- What workforce capabilities and structures do we need?
- How do we optimise our assets?

All above mentioned issues are closely related to the organization and management system. In order to establish a new university model to meet the requirement and expectations of the future, firstly we need to review the classical university organization and modus operandi.

2. RESEARCH METHOD

The aim of this study is to do a research on the organizations and management systems of the universities to fulfil their existing and future mission and to define key areas which may introduce some solutions.

The research is conducted in three steps. In the first step it is intended to understand the new role and missions for the universities mission.

The eligibility of the existing organization system to meet the existing and future missions will be discussed in the second step under the organization and management principals. The problem areas including human factor are clearly defined and summarized as findings at the end of this step.

In the final step the findings of the second steps are categorised, grouped and associated if possible and a further study has been made to formulate possible/probable solutions to be proposed.

3. EXISTING SYSTEM

The following standards are considered essential elements to identify the existing organization and management systems of the universities;

- Mission, aim and objectives
- Governance and administration
- Management of quality assurance
- Learning and teaching
- Research
- Student administration and support services
- Financial planning and management
- Institutional relation with the community

The main mission of universities is education and training. Research is the second mission of them which also covers relations with the community. The aim is to deliver the upper level knowledge to the community and provide research in support community in particular for science and technology. The one important objective of the tertiary education is to provide qualified manpower for the business and industry.

The universities can be classified in two main categories which also affect their organization and management systems. These are state and private universities. The state universities are under the control of the government and serve for government policies. Although they may have some level of autonomy the state universities have a limited manoeuvre freedom due to limited funds. The private universities are also operated in accordance with government established rules. They have more freedom but are limited by economic considerations which are vital for them to stay alive.

The organization and management systems of the state universities are generally stereotype throughout the country. The organization is generally orthodox and based on academic departments and some additional units for research, post graduate studies and continuous education. There is a significant effect of the government policy

and bureaucracy on the system which hampers any improvement attempts. Although they have been led by the academics, their role is very limited in decision process.

The private universities are led by the board of trustees. The board members are generally the founders or relatives and ex-high level managers from the private or government institutions and they are generally well aware of the existing policies and economic considerations but not so well on the procedures, rules, regulations and working styles of the academic world. Their decisions on the management application are generally well designed but hard to apply due to challenges with the rules and regulations of the universities.

The government effect in the state universities and shareholders effect on the private universities are generally the main drive which shapes the strategy and plans and sometimes create problems when the other layers of society such as the government, local authorities, NGOs etc involves. Sometimes this underestimated outsider factors badly affect the plans and programmes.

The existing organizations of the universities are based on functions such as academic units, research and innovation centres and administrative support units. The academic units are mainly organized as faculties or postgraduate institutes but the number of the faculties has been extremely increased end too many derivatives from a major science are created. The number of the faculties are now beyond the control capacity of a vice rector responsible for academic units. Although the optimal number varies from one firm to the next, many management writers agree that top management should directly supervise no more than four to eight people (Boone and Kurtz, 1987). This situation also hardens the coordination between the academic units.

The research units are named as research, innovation, technology transfer centres or institutes and sometimes techno parks. The number of these units is increasing and the both internal and external coordination becomes difficult. Additionally most of these units are headed and/or manned as twin mandate or part time and that reduces the effectiveness of these research units

Learning and teaching methods have drastically changed. The new system is based on satisfaction of learning outcomes which force both students and lecturers spend more time for independent studies based on researching different sources rather than classical course books. More visual aids are used during guided learning hours and laboratory hours are increased. On-the-job training becomes an important element of learning and teaching under the control of academician. More radical changes are expected in the future decade following new improvements in technology, in particular IT.

A handful of new surveys, outlined today by TIME magazine , show that employers are challenged by much more than just finding talented software developers and engineers. In fact, a lack of interpersonal skills like communication, collaboration and creativity, and a disregard for punctuality, appearance and flexibility seem to be much bigger problems among the latest crop of entry-level job candidates (Baverman, 2014). Universities also need to improve to produce a solution to fix this crucial problem.

The research activities were a secondary mission of a university historically. But today it becomes an essential role competing with the education. The research and education are now inseparable functions in particular for postgraduate studies. The number of the research units in university organization is more than academic department and lecturers are spending more time for research rather than teaching. The research activities are also increasing the quality of the lectures delivered.

The lifelong learning and new teaching methods have changed the demography of the students. The young and older students are taught in the same classrooms. The teaching hours enhanced out of the working hours. E-learning needs too much tutor support. The libraries became learning resource centres with digital information availability and serving 7 days 24 hours uninterrupted. All these factors enforce universities to change their existing structure and operating system of the student administration and support services.

The number of the private universities is significantly increasing against the state universities. These universities need a perfect financial system to enhance their capabilities and more importantly to survive. The state universities are not able to improve themselves depending only state provided funds and they also look for new financial support by enhancing their cooperation with business which provides financial sources for both sides

The quality assurance became rather important after the 1980s. Approximately all of the universities are looking for accreditation by an internationally reputable accreditation body and also an awarding body to facilitate the employment of their graduates in the related sectors. The accreditation also facilitates cooperation and student/lecturer exchange among the universities.

Most of the improved even improving countries have established their vocational qualification systems which cover accreditation and awarding procedures. This situation enforced the universities to establish links with awarding bodies which is closely related to the business world. Thus the programmes delivered at the universities became very closer to the real world applications.

Most universities are assuming a critical role in the techno parks established by the industry and companies are establishing permanent liaison offices in the universities to ensure best coordination and cooperation. An effective on-the-job training system should be matched to academic system to understand existing practices, procedures, applications in the real world. The part time or even short period full time deployment of some academicians in the industry should also be considered to update the existing information and knowledge.

4. ANALYSES OF THE FUTURE ROLE AND MISSIONS:

In many different studies the roles and missions of the universities are discussed and introduced. The significant findings in these studies are described in the following paragraphs.

The Bologna Declaration is the most credited and recognized document concerning higher education policies and applications. The declaration states the following objectives:

- adoption of a system of easily readable and comparable degrees;
- adoption of a system essentially based on two main cycles, undergraduate and graduate;
- establishment of a system of credits – such as in the ECTS;
- promotion of mobility by overcoming obstacles to the free movement of students, teachers, researchers and administrative staff;
- promotion of European co-operation in quality assurance;
- promotion of the necessary European dimensions in higher education.

The first European-level 'Work Programme for Education and Training 2010' is agreed in 2002 covering next ten year (European Council, 2002). In this plan for modernising education systems in EU confirmed the three overarching objectives adopted in 2001: "improving quality and effectiveness"; "facilitating access"; and "opening up national education and training systems to the world" (Education Council, 2001). As a follow-up the European Commission has extended its involvement in the higher education sector by two additional routes: firstly, "through its research policy" — as an aspect of the EU's Lisbon Strategy for growth and jobs — and, secondly, by supporting "institutional and structural" reform of the tertiary education sector under the intergovernmental umbrella of the Bologna Process (Keeling, 2006).

The EU Heads of State and Government, meeting in Lisbon for the Union's Spring Council of 2000 pledged to work towards making the EU the most 'dynamic knowledge-based economy in the world' by 2010 (European Council, 2000). This new strategy (Lisbon Strategy), also made an emphasis on the "research" activities in the community through the EU Lisbon Strategy for "economic growth and employment the EU". This new policy objective stimulated the European Council in Barcelona in 2002 to commit the EU to the goal of raising overall expenditure on research and development to 3% of GDP by 2010 (European Council, 2002b). These strategy documents recognised higher education institutions among the 'key stakeholders' in European research: according to the Commission, European universities employ one-third of European researchers and produce 80% of fundamental research in Europe (European Commission, 2005). In its Action
Plan, the Commission stressed the need for coherence in research policies, for increasing public support and resources for research and for improving the framework conditions for research and development in Europe in order to contribute to the Lisbon goals.

All above mentioned facts may be resumed as follows:

- Universities have a crucial role for "economic growth and employment the EU" by the way of "research",

- Universities are now a "stakeholder" of the economy and business and that require further cooperation and cooperation among all concerned parties,
- International cooperation and collaborations is the key factor to be successful in the challenging world economy,
- The" improving quality and effectiveness";is the main aim and that could be achieved by "facilitating access"; and "opening up national education and training systems to the world"

OECD CERI (Centre for Educational Research Institute) has organized an Experts Meeting on "University futures and new technologies" and a Discussion Paper has been submitted at the end of these meeting which mentions Six Scenarios for Universities (OECD/CERI, 2004). In the Discussion Paper, the six variables selected for constructing the five scenarios are: 1) the type of population covered by tertiary education, as well as correlated variables; 2) the nature of funding (predominantly public, mixed, predominantly private); 3) the integration of missions offered; 4) the international dimension of the system, 5) the homogeneity of status of faculty and institutions, and 6) the degree of take-up of technology (e-learning, e-research). The six scenarios are based on the following issues; Tradition, Entrepreneurial universities, Free market, Lifelong learning and open education, Global network of institutions, Diversity of recognised learning – Disappearance of universities

The analysis of six scenarios dictates that:

- The universities should revise their Student Affairs related departments and procedure considering big changes in the students' demography (mid-age new comers, professional courses) as well as working hours,
- More PR activity is required to establish a strong link with society,
- An improved financial system and coordination units to secure cooperation and collaborations with business and industry,
- Flexible rules and structure to respond continuously changing requirements

In the light of these findings the roles of the universities are;

- To provide knowledge for the policy makers and leading groups of the business and industry
- To provide technologic support for the business and industry to improve the life quality by academic research
- To provide qualified manpower in support of the business, industry, government and local authorities.

The new requirements raised in the 21st century which needs the support of universities:

- Specialization on a definite subject to create a sound effect on the policies and procedures by way of scientific research
- The close cooperation with business, industry, government, local authorities and NGOs in particular occupational issues to provide well-qualified manpower for them
- To improve the human quality during and after higher education stages as a part of lifelong learning in particular completing the missing educational and cultural skills of the previous stages of the education period.
- To create a holistic education and training system matching academic and vocational requirements

The academic freedom can be summarized under two headings: freedom, freedom of learning and teaching. This freedom also covers freedom of research. Similarly, the proposed European Union Constitution explicitly states in Article II-73 that '[t]he arts and scientific research shall be free of constraint. Academic freedom shall be respected' (European Union, 2005). But there is another fact that more management and control means less freedom. It is the same in the university. Surprisingly, scholarly articles on ''academic freedom'' rarely mention freedom from management as an important feature of academic freedom' (Kernel, 2009). As a result of this fact, the organization and management structure of future universities should be set up as a flexible system which provides freedom for movement for both education and research activities.

Leaders of all institutions and programs, to be effective in this era of digital competition, need a strong rationale and framework for organizational change. This rationale will provide a foundation for organizational adjustments and even transformations necessary to respond to the opportunities and risks presented by increased worldwide demand for learning, advancing learning technologies, and growing competition among multiple providers, all seeking to gain competitive advantage. This rationale can be enhanced by an understanding of organizational change theory and might include such factors as:

· The relationship of universities to social purposes and goals
· Higher education as an open system
· The powerful influence of external factors
· The importance of multiple points of resistance
· Alternative means of achieving similar results
· The complexity of system-wide adjustments
· The role of competition in fostering innovation
· Collaboration and communication as vehicles of change
· Technology as a lever for transformation

Clearly, all universities have the potential to become the educational equivalent of global multinational corporations that operate across national boundaries (Hanna, 1998).

The owners/shareholders were the only authority leading an organization up to the last quarter of the 20th century. After that many other factors started to play a significant role on decision process when leading a company as a result of new world order. Now worker unions, NGOs, sector institutions, NGOs and local government play a significant role on decisions as government policies shapes strategic plans of the all types of institutions.

A new strategic management concepts has been introduced, namely Stakeholders Approach. The stakeholder concept can be useful in integrating some of these issues (plans and systems of the plans for business level entities, role of the corporation in the social systems, social responsibility of the business, behaviour of the large group of the populations of the organizations and their environments) around the concept of organization strategy, that is around the issues of how organizations can configure themselves and take actions to align themselves with the environment (Freeman, 2011). Unfortunately the universities have no intention of adopting new strategic concepts. This will create a negative impact on the success of universities when they cooperate with the business world.

The new application is called "stakeholders concept" which became important for the strategic management of the organizations. The term was meant to generalize the notion of the stakeholder as the only group to whom management need to be responsible. The concept was originally defined as "groups without whose support the organization would cease to exist". The list of the stakeholder originally included shareholders, employees, customers, suppliers, lenders and society (Freeman, 1987).

Today all organizations are under the effect of their stakeholders when they make their strategic plans. In order to prevent any negative impact on their organization, the managers should take into consideration all these effects. The stakeholder influences are grouped as economic, technological, political, social and managerial. Any decision in particular related to a new course of action needs to be reviewed under the above mentioned five effects.

As far as concerning the effects of the stakeholders, some examples related to the university are as follows;

- Economic: To handle a university with only student fees and government financial aids is not sufficient today. The research activities needs more financial support and this can be achieved by close cooperation with other parties require research and innovation for improving their work.
- Technological: To handle research projects are generally costly. To overcome cost problem the university needs to find partners which may support the research activities. So the university should follow the technological improvements and match its research activities with the technological expectations of the industry.
- Political: The area of manoeuvre of the state and private universities is limited by existing legislative and administrative rules and regulations which are generally not flexible. In order to enhance their freedom of movement they should follow all political improvements even they should create an influence on society when the new rules and regulations are shaping. The acquis in the hand of the universities is sufficient to achieve that but needs to be organized for that.
- Social: The NGOs has a great influence on the society to shape a new social order. Any cooperation, institution should be very sensitive to understand the new social approaches introduced by NGO to be able to redefine their new roles and responsibilities.
- Managerial: The new role of the manager is to keep an eye on society and the economy in addition to existing functions. A manager cannot estimate new course of actions without taking into account the new expectations of the people and economic developments.

To this end, today the presidents, rectors, deans are not only a manager to direct their academic units. To provide better opportunities for their universities they need to work as a businessman or CEO of a company. If the new area of interest is the use of the business strategies and techniques, the marketing becomes highly important to

survive. Beyond everything a business must have customers, for without them there is no business (Lloyd, 2007). Finally it would be better to say that the university needs to add some people with business skills into their organization.

The deterministic operating system is applied for the universities by the 1980s. This is a system which the attitudes are well known and generally static and based on definite rules and regulations. The new roles of the universities concerning condense research activities, cooperation with industry and this caused a drastic change on the operating system. The new system approach is probabilistic which the attitudes of the system cannot be predicted (Oygur, 2004). It would be better to consider a holistic solution. All the elements of the system should be reviewed and the solutions should be created on this analysis.

It is proposed that the whole existing and future functions of the universities should be carefully analyzed and holistic solutions which provide a management system which meets overall requirements should be created.

The organization culture is highly important when establishing strategy, because appropriate strategies may be negated by incompatible culture (Mathis & Jackson, 1988). This enforces the universities reconsider their organization culture. And managerial level should be well prepared to assume risks.

The structure of the formal organization is based on analysis of three key elements of any organizations; human interactions, goal-directed activities and structure. Management must coordinate the activities of workers to accomplish organizational objectives (Boone & Kuntz, 1987). That means the management should carefully analyze these three elements and direct all elements of the institutions to reach the objectives with a well organized coordination effort.

The small firm is driving force in innovation in innovations observes Edward Roberts, a management professor at the Massachusetts Institute of Technology. It is only reason for existence is to bring a new technology or product to market, but the small company forces a big company to take notice and compete (Boone & Kuntz, 1987). The universities should be very careful when they establish research groups and the large research groups for development of innovation may be avoided.

Henry Fayol defines the activities in organizations under six groups; technical (production), commercial (sales, purchase and procurement), Finance, Accounting, Safety (Security) and Management (Kocel, 2007).

The functional organization is the most common structure used in the practice. This functional organization is based on putting the works and tasks considering their essence (qualification). As an example an organization can be grouped as accounting, marketing, production, personnel management departments putting all related jobs under these functions (Kocel, 2007). The education may be assumed main production of the university, research activities may be grouped under a single block and all other administrative activities may be grouped as a support group.

The cooperation with business and industry is vital but needs additional studies and creation of a suitable mechanism to achieve it. The following issues should also be considered for getting more benefit from the cooperation:

In order to get benefit from the experiment of the government, business and industry inclusion of teaching staff from this organization to academic system and combining these augmenters into the existing academic structure should be formulated.

a. An effective on-the-job training system should be matched to academic system to understand existing practises, procedures, application in the real world. The part time or even short period full time deployment of some academicians in the industry should also be considered to update the existing information and knowledge.
b. The universities should take a more important role for development of innovation and transfer of innovation. The cooperation with abroad universities will be a better tool for transfer of best practices in the other parts of the world.
c. All above mentioned activities need establishment of a cooperation and coordination mechanism in the universities. But this mechanism should have a background and expertise on the business and industry world to establish a suitable coordination.
d. Each university should select a specific subject to be focused on rather than diversifying his efforts on many different subjects. And they should participate into all related local and international activities

including the media. This will provide a reputation for the university and the university will be a key player in this field.

5. A SURVEY ON THE MISSION AND ROLES OF THE UNIVERSITIES

The academicians are the key element of the universities. Any study on the review the new roles and missions f the universities should cover the situation and expectations of the academicians which will play a crucial role to fulfil the requirements to achieve new expectations. The aim of the survey is to understand the academicians' view of the mission and the roles of the universities.

The survey is conducted in the IMLA 22 (2013) (International Maritime Lecturer Conference) conducted in China, ICQH 2013 (International Conference on Quality in Higher Education), ICQH 2014 XII. LM-SCM (2014) (International Logistics and Supply Chain Congress) and ERPA 2014 (International Education Conferences) conducted in Turkey. The academicians from different countries are selected as target group.

The main hypothesises of the survey was:

- H1: The teaching is the main function of the universities
- H2: The academicians prefer teaching is rather important than research
- H3: The research capabilities of the universities are still limited
- H4: The research activities are important for industry rather than universities
- H5: The research activities improve the quality of teaching in universities

Considering time constrains during the conferences questions in the questionnaire are prepared very simple and could be answered in a short period. The questionnaires are applied in form of face to face interviews. Total 62 academicians from 14 countries are participated. 32 academicians are teaching science and 30 are teaching social science.

The responds to questions are as follows;

What is the priority task for the university?

Academicians	Teaching	Research
Science	24	8
Social Sciences	28	2
TOTAL	52	10

Is your university capable to conduct research activities sufficiently?

Academicians	Fully	Partly	Not
Science	6	24	2
Social Sciences	2	15	13
TOTAL	8	39	15

Do you have sufficient sources to conduct research studies?

Academicians	Fully	Partly	Not
Science	6	24	2
Social Sciences	2	15	13
TOTAL	8	39	15

Are you able to find sufficient time for your research studies?

Academicians	Fully	Partly	Not
Science	4	10	18
Social Sciences	8	10	12
TOTAL	12	20	30

Do research activities contribute your teaching quality?

Academicians	Fully	Partly	Not
Science	15	12	5
Social Sciences	10	14	6
TOTAL	25	26	11

Do you have sufficient opportunities to cooperate with industry/society?

Academicians	Fully	Partly	Not
Science	8	14	10
Social Sciences	6	8	16
TOTAL	14	22	26

Do you believe that your institute is apply matrix organization to conduct both teaching and research activities in balance?

Academicians	Fully	Partly	Not
Science	4	16	12
Social Sciences	3	10	17
TOTAL	7	26	29

Who gets more benefit from research activities?

Academicians	University	Industry/Society
Science	8	24
Social Sciences	6	24
TOTAL	14	48

In according to results of the survey; the hypothesise H1 (The teaching is the main function of the universities), H2 (The academicians prefer teaching is rather important than research), H3 (The research capabilities of the universities are still limited) and H4 (The research activities are important for industry rather than universities) are proved. H5 (The research activities improve the quality of teaching in universities) could not be proved.

The evaluation of the survey results which reflects the view of the academicians may be resumed as follows;

- The priority task of the universities is still teaching (84%). But there is a new approach to assume the research as a priority task among the academicians teaching science (27.6%).
- The academicians believe that the universities are not fully capable to conduct research studies (87.5%). Most of the universities are partly capable to conduct research studies in science field (62.9%). The universities not capacity to conduct research in social sciences (43.3%).
- The universities have not sufficient sources to conduct research (90%). They have very limited sources to conduct research in social science (93%).
- The academicians have not sufficient time (80%) and opportunities (77.4%).
- The science lecturers mostly (59.7%) but social science lecturers partly (33.3%) believe the research activities contribute their lecturing quality.
- The academicians assume the cooperation with industry/society is low (80.6%). 34.3 percent of the science and 53.3 percent of the social science lecturers believe there is no cooperation between university and industry/society.
- Most of the lecturers (88.7%) believe that it is not easy to apply matrix organization to match teaching and research activities in the university.
- Most science lecturers (75%) and social science lecturers (80%) believe the industry gets more benefit from the university and industry cooperation.

To this end it may be stated that the academicians have many queries on the research activities and university and industry/society cooperation. Any work requires manpower, time and sources. Being the major manpower, the academicians are the key element of the universities. They need time and sources to achieve their mission. Unless they have been contented it would not be so easy to achieve an effective cooperation between university and

industry. The success of any organization is depending upon the satisfaction of the human element that will be deployed.

6. CONCLUSION

As a result of this study it is understood that most of the universities are not adopting contemporary business and management practices. Success depends upon correct decisions to provide smooth operation of the organization. It is evident that all institutions should adopt new business management techniques and practices to survive in a challenging world.

The followings are suggested for the universities to improve their business organization and management system for the future role and missions:

Board of the Trustees and/or Board of the Managers

An enhanced Board of the Trustees and/or Board of the Managers are proposed under the "stakeholder" concept. The members from focused sectors, government institutions, high level managers, experienced financial experts, even related NGO representatives should be included. The business development should be a main area of interest like corporation and some members should have commercial, management and financial background to achieve that.

President or Rector

The president or rector should be capable of assuming the role of a CEO in a company. That dictates that the highest officer of the university should have a managerial experiment not only in the university but also in the business world. The president should be supported by full or part time legal, financial, strategic planning and commercial adviser. Existing advisers are expert on the education related systems but new generation advisers should have experiment on the commercial management.

Academic Units

The faculty, community college, postgraduate schools will be still key elements of the academic units. But the programme development became a continuous job to meet the requirements of new qualification framework and close cooperation with business and industry. A new department responsible for programme development is now needed to improve contemporary faculty programmes as well as responsible to improve double major, distance learning and personal development programmes. A task oriented flexible departmental system for academic and research units which secures control of the system effectively and also allows freedom of thinking is proposed.

Research Units

The key actors of the research in the university are academicians. But the industry needs more specific and elaborate research studies which should be supported by external researchers. The experiments proved that small research groups are fairly effective for innovation projects. This increases the number of the independent research units. To provide better coordination and easy the management procedures a coordination and control unit is required. The research units should be provided administrative support to facilitate their studies and this function may be placed under coordination and control unit dedicated only for research teams. The control of too many units under a single manager is not preferred and grouping of the similar- resembling research activates under a group leader is advised.

Twin mandate of academician in both lecturing and research roles is inevitable. The most universities have applied matrix organization for teaching and research functions. But it is evident that this application may reduce the effectiveness of both functions. In order to secure the research studies every research team should have a coordinator who has not a lecturing role and is devoted only for research. Each research units should be manned with permanent core staff and augmented with the academic staff related the subject under the matrix organization concept.

The financial support of the research projects and coordination and cooperation with industry are the key element to achieve a research project. Many research projects have been hampered due to lack of wrong pricing, insufficient finance and lack of coordination. These functions are generally irrelevant for the researchers and should be assumed a strong team in the support units.

Supporting Units

The composition of the students is radically changed. Now we have elder students, people who take distance learning, visiting students, professional students taking professional studies in the continuous education centres which each needs different treatments. The classical working procedures of the Student Affairs department should be revised taking into account new demography of the students.

The universities produce and sell "goods" like a commercial company. That requires establishment of a commercial system including "marketing", "pricing", "public relations", "advertisement", "budgeting", "financing", procurement", purchasing" etc. These are the functions need special professionals with market experiments.

Total Quality Management and Quality Assurance is vital to ensure the quality of the job and correction of the system to achieve perfection. The production of the university is not only education but also technology which each requires application of different quality management procedures.

The coordination, cooperation and collaborations with national and international institutions, universities, business and industry and sector have the ultimate importance.

The management of the facilities such as buildings, laboratories, simulators, open areas, social facilities is highly important to effective and feasible use of the existing properties. The new requirements also dictate sharing these facilities with other organization and using the assets of the other institutes. That requires deliberate planning and conduct.

A full spectrum supporting unit which fully supports academic and research units and achieves close cooperation, coordination and collaboration with business and industry will secure the mission of the universities providing qualified manpower for the society and meeting the academic research requirements of the business and industry.

Basic Organization Diagram

Every organization represents its organization diagram in according to its own requirements. The diagram proposed here is a simple example which supports all above mentioned issues.

- The management board covering a large spectrum containing all respective shareholders as well as related stakeholders
- A directorate with adviser in particular for finance and commercial management and vice directors responsible for three main functions which are education, research and support
- Academic units such as faculties, community colleges, postgraduate schools and academic institutes responsible for specific area of interest and professional studies. A new department responsible for programme developments
- Research units generally consist of small teams specified on a definite research area, but all related teams are grouped under a group leader to facilitate control and coordination
- Supporting units for student affairs, commercial management, facility management, TQY and QA, IT, coordination, cooperation and collaboration. A unit responsible for finance, accounting and budgeting is highly important to manage all commercial activities.

Final word

Any change in the organization and management system directly affects and is affected by the organization culture. University culture is based on a tradition rooted and strong ties with history of civilization. To this end all changes should be actualized taking into account the cultural habits and acquis of the university and any major conflict must be refrained.

The academicians play a crucial role to achieve new roles and missions of the university. So it is important to content academicians to assume the new tasks eagerly.

One of the big mistakes during application of a new strategy is creating interim plans which generally may seriously crate a negative impact on the success of overall plan. To avoid that a full plan should be prepared and applied gradually instead of applying interim plans. Interim plans may cause diversion of the main aim and objectives. A strong decision should be obtained and a full scale plan should be applied without any compromise to make a fundamental change for organization.

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AN INVESTIGATION OF ELEMENTARY PRESERVICE TEACHERS' ATTITUDES TOWARDS WRITING

Rebecca M. Giles, Ph.D.[1], Andrea M. Kent[2]

[1]Professor and EEC Program Coordinator

University of South Alabama, College of Education, UCOM 3100

Department of Leadership and Teacher Education, AL 36688-0002

rgiles@southalabama.edu

[2]University of South Alabama, College of Education, UCOM 3100

Department of Leadership and Teacher Education, AL 36688-0002

Abstrat: This article examines how elementary (K-6) preservice teachers (n=34) perceive writing and themselves as writers. Results may indicate limited experience discussing and/or sharing their writing with classmates and peers throughout their education for the purpose of honing their craft as writers. By better understanding the role of preservice teachers' attitudes about and experiences with writing, teacher education programs can assist preservice teachers in developing healthy attitudes toward writing. Improved teacher attitudes could potentially improve classroom writing instruction as well as elementary students' attitudes towards writing and views of themselves as writers.

INTRODUCTION

Writing, in its many forms, is the signature means of communication in the 21st century and, as such, a crucial skill for individuals to be engaged in as learners and active participants in today's interconnected world. While the recommendations made by the National Reading Panel in 2000 emphasized the core components of teaching reading with little acknowledgment regarding the teaching of writing (National Institute of Child Health and Human Development, 2000), the Common Core State Standards (CCSS), which have been recently adopted by 45 states, the District of Columbia, and four U.S. territories, stress the teaching of writing as well as reading (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). The prominence of writing in the CCSS makes effective writing instruction essential in elementary classrooms. Students who not only know how to write well, but also know how to learn through writing in all disciplines, have a greater chance of academic and career success (National Writing Project, 2013). Thus, the National Commission on Writing (2003) has suggested that schools double the amount of time most students currently spend writing. Implementing this suggestion would require writing to be taught in all subjects, at all grade levels, in a variety of formats, truly exemplifying the belief that "writing is everybody's business" (p. 5).

Unfortunately, many pre- and inservice teachers have negative attitudes towards writing (Howard, 1984; Levin, 1993; Richardson, 1992) and are not prepared to use writing with their students or are unable to help their students develop into writers (National Commission on Writing, 2003). It is possible that these unconstructive attitudes are a result of their own lack of confidence as writers. Teachers who are not confident writers themselves, do not feel adequate to teach writing (Bowie, 1996). It is fundamentally important that preservice teachers examine their own attitudes towards writing and view of themselves as writers before accepting responsibility for teaching others to write. Further, it is vital that teacher educators lead preservice teachers through the examination of their attitudes toward writing while assisting them in obtaining the knowledge, skills, and abilities to teach writing as part of a well-balanced literacy program and integrated across the curriculum.

WRITING ATTITUDES

Attitudes brought to writing influence what individuals can ultimately achieve in writing (Musgrove, 1998/1999). Similarly, the attitudes brought to writing instruction impact a teacher's effectiveness. In Levin's study of 67 preservice teachers, 42 (63%) had negative feelings about writing and claimed to write only when required to do so. Howard (1984) reported that while teachers may not be willing to blatantly state that writing is unimportant, they did have a negative connotation of writing and seem to associate writing assignments with

extensive amounts of work. Street and Stang (2009) found no significant relationships between secondary inservice teachers' lack of self-confidence as writers and gender, years teaching, subject matter taught or grade level taught. Rather, the vast majority of these participants cited former teachers and school experiences as the most important factors that influenced their views of themselves as writers. In fact, negative attitudes about writing are most often the result of previous writing experiences (Richardson, 1992; Phillips, 1992). This is not surprising considering that preservice teachers have been exposed to years of writing experiences before they enter the university, the quality and interactions of which would certainly contribute to how they define themselves as writers (Street, 2002). In fact, attitudes have been defined as "psychological states acquired over a period of time as a result of our experiences; these attitudes influence us to act in certain ways" (McLeod, 1991, p. 98). Some teachers bring negative attitudes about their abilities to use the writing process and their teaching of it to the classroom (Richardson, 1992).

The influential relationship between teachers' attitudes about writing and their classroom practices have been repeatedly established (Bratcher & Stroble, 1994; Bowie, 1996; Grossman et al., 2000; Kennedy, 1998; Lapp & Flood, 1985; Mayher, 1990; Schmidt & Kennedy, 1990; Shrofel, 1991). Gaining insights into the writing attitudes of preservice teachers is essential to understanding more fully the relationship between the learning experiences of these future teachers and their effectiveness as teachers of writing (Bloom, 1990). The research of Bratcher and Stroble (1994), who conducted a longitudinal study of teachers who participated in the National Writing Project Summer Institute, clearly demonstrates that self-confidence in teachers is crucial in order for growth in both writing and teaching to occur. Likewise, Bowie (1996) discovered that when teachers are not confident writers themselves, they do not feel adequate to teach writing or to use it as a tool. In a qualitative study by Street (2003), teachers who saw themselves as writers offered a great deal to students regarding in-class writing experiences that other teachers did not. Graves (1983) states the importance of individuals seeing themselves as both writers and teachers before entering the classroom: "The teaching of writing demands the control of two crafts, teaching and writing. They can neither be avoided, nor separated" (p. 6). Until teachers know as authors what writing is like, they will never truly be able to teach their students to write well (National Writing Project, 2013).

While it is challenging for university faculty to overcome negative writing attitudes (Street & Stang, 2009), research demonstrates that, indeed, writing attitudes and skills can be changed by effective university courses (Chambless & Bass, 1995; Franklin, 1992; Lapp & Flood, 1985; Phillips, 1992; Stover, 1986; Street, 2003; Street & Stang, 2009). Findings from two focus groups conducted with preservice teachers indicated that teacher educators should not only concentrate on building preservice teachers' confidence in the teaching of writing, but also on helping them become better writers themselves (Hall & Grisham-Brown, 2011). Chambless and Bass (1995) suggest that if teacher educators want to influence teachers' writing attitudes, they must stress process-writing pedagogy in their courses. Acknowledging the strong influence of teachers' writing histories on their attitudes about writing, Street and Stang (2009) recommend situating writing instruction within a nurturing and sustaining learning community that focuses on sharing in-process writing and supporting each individual's identity as a writer. By uncovering and exploring writing attitudes in university settings, teacher educators can help students as they strive to accept new methodologies and conceptions of writing. As this newly gained knowledge of writing and how to teach it increases, their attitudes of themselves as writers becomes more positive making them better prepared to effectively incorporate writing into their classrooms (Lapp & Flood, 1985; Street, 2002).

PURPOSE AND SIGNIFICANCE OF STUDY

The writing attitudes of preservice teachers are an important consideration for a number of reasons. Most significantly, attitudes influence practice, and these individuals will soon be responsible for teaching writing in schools to students, where superior writing instruction is needed (Street, 2002). Also of note is the influence that teachers' attitudes have on the development of students' attitudes. Thus, improved teacher attitudes could potentially improve classroom writing instruction as well as students' attitudes towards writing and views of themselves as writers. The purpose of this study was to explore the writing attitudes of preservice teachers in order to inform the practices of teacher educators regarding writing instruction methodology.

PARTICIPANTS

A quantitative, descriptive research model was used to investigate writing attitudes of elementary preservice

teachers (n=34) in the College of Education at a university located in the southeastern United States. The university is classified by the Southern Association of Colleges and Schools as a Level VI institution and by the Carnegie Foundation for the Advancement of Teaching as Doctoral/Research Intensive University. Thirty-two participants were female, and two were male. Thirty participants were undergraduates, and four were graduate students. The race of the participants was as follows: 29 White, 4 African American, and 1 Asian. All participants were seeking initial teaching certificate in Elementary Education (K-6).

INSTRUMENT

The Writing Attitude Scale (Podsen, 1997) was used to collect data in this study. This 20-item instrument, which uses a 5-point Likert-like response scale ranging from "Strongly Agree" to "Strongly Disagree," ascertains the respondents' attitudes about writing and their perspective of themselves as writers. Twelve items (2, 3, 7, 8, 9, 10, 12, 13, 16, 17, 18, and 20) are positive statements regarding feelings toward writing, and eight items (1, 4, 5, 6, 11, 14, 15, and 19) are negatively stated. The negative items are reverse scored for directional consistency when scoring. Possible scores range from 20 to 100, with higher scores indicating a more positive, more confident attitude toward writing and one's self as a writer.

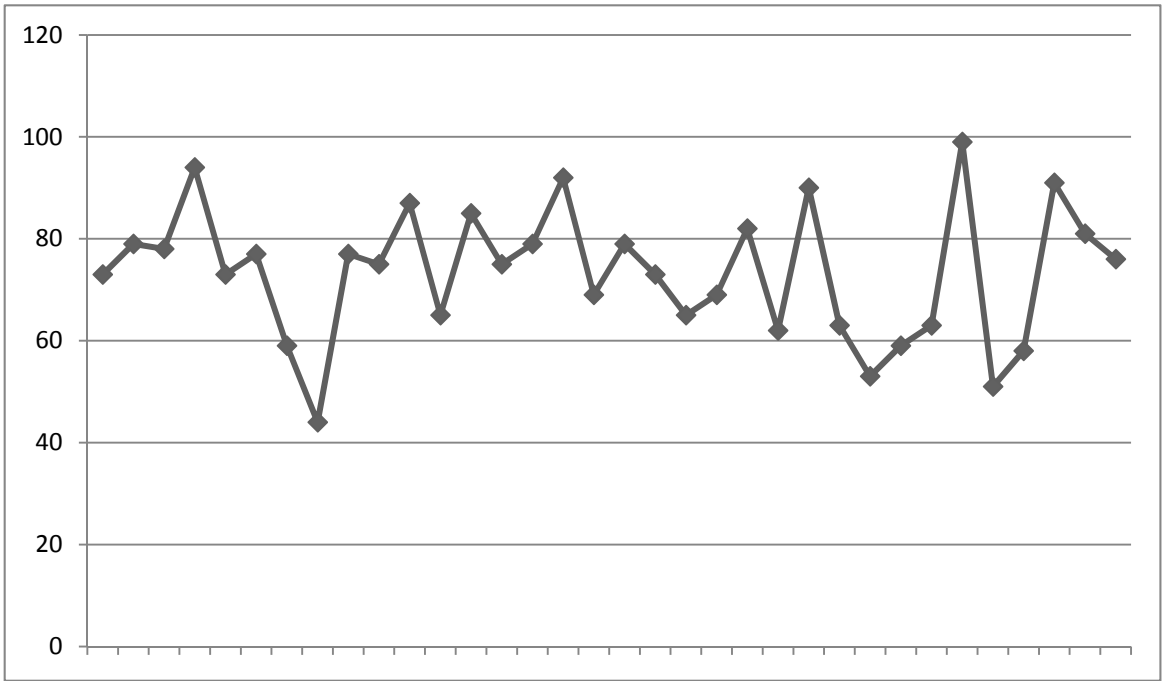
DATA COLLECTION AND ANALYSIS

The instrument was disseminated to 36 elementary preservice teachers via Survey Monkey™ correspondence at the end of their semester long internship in a public school K-6 classroom. Thirty-four preservice teachers completed the survey for a response rate of 94%. Responses to the survey items were converted to numerical data, and the mean, median, mode, and standard deviation were calculated. The research question was examined using descriptive statistics to calculate frequencies and percentages. For the purpose of determining concurrence, responses for "strongly agree" and "agree" were added together. To maintain uniformity, responses to "strongly disagree" or "disagree" were added for the purpose of identifying disagreement.

RESULTS

Total scores on the Writing Attitude Scale, which are presented in Figure 1, spanned from 44 to 99 with a range of 55. The mean was 73.3 with a standard deviation of 13.02. The total score median was 75, and the data set was bimodal, resulting in modes of 73 and 79.

Figure 1 Distribution of Total Writing Attitude Scale Scores



Responses to the 12 positively stated items reported as both frequencies and percentages appear in Table 1 while responses for the 8 negatively stated items are reported in Table 2. The highest rated items were items 1 and 3 with 30 (88.2%) participants disagreeing with the statement "I avoid writing whenever possible" and agreeing with the statement "I look forward to writing down my ideas." Other items rated at higher than 80% included 29 (85.3%) participants disagreeing with item 6 (Expressing my ideas through writing is a waste of time.) and 28 participants agreeing with item 16 (I like seeing my thoughts on paper.). The lowest rating was obtained when 20 (58.8%) participants reported disagreeing with items 7 (I would enjoy submitting my writing to magazines for evaluation and publication.) and 10 (I like to have my friends read what I have written.). As shown in Table 1, participants greatest use of "I Don't Know" as a response occurred with items 12 (People seem to enjoy what I write.) and 17 (Discussing my writing with others is an enjoyable experience.), with responses of 18 (54.5%) and 11 (32.4%) respectively.

Table 1: Participants' responses to positively stated items

	Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
2. I have no fear of my writing being evaluated.	6.1% (2)	21.2% (7)	6.1% (2)	**42.4% (14)**	24.2% (8)
3. I look forward to writing down my ideas.	0.0% (0)	5.9% (2)	5.9% (2)	**58.8% (20)**	29.4% (10)
7. I would enjoy submitting my writing to magazines for evaluation and publication.	23.5% (8)	**35.3% (12)**	17.6% (6)	17.6% (6)	5.9% (2)
8. I like to write my ideas down.	2.9% (1)	11.8% (4)	5.9% (2)	**58.8% (20)**	20.6% (7)
9. I feel confident in my ability to express my ideas in writing.	2.9% (1)	5.9% (2)	14.7% (5)	**47.1% (16)**	29.4% (10)
10. I like to have my friends read what I have written.	2.9% (1)	20.6% (7)	17.6% (6)	**41.2% (14)**	17.6% (6)
12. People seem to enjoy what I write.	3.0% (1)	9.1% (3)	**54.5% (18)**	24.2% (8)	9.1% (3)
13. I enjoy writing.	0.0% (0)	17.6% (6)	11.8% (4)	5**0.0% (17)**	20.6% (7)
16. I like seeing my thoughts on paper.	0.0% (0)	8.8% (3)	8.8% (3)	**61.8% (21)**	20.6% (7)
17. Discussing my writing with others is an enjoyable experience.	2.9% (1)	14.7% (5)	32.4% (11)	**38.2% (13)**	11.8% (4)
18. It is easy for me to write good letters.	0.0% (0)	11.8% (4)	20.6% (7)	**50.0% (17)**	17.6% (6)
20. Writing is a lot of fun.	0.0% (0)	20.6% (7)	11.8% (4)	**55.9% (19)**	11.8% (4)

Table 2: Participants' responses to negatively stated items

	Strongly Disagree	**Disagree**	**Don't Know**	**Agree**	**Strongly Agree**
1. I avoid writing whenever possible.	29.4%(10)	**58.8%(20)**	11.8% (4)	0.0% (0)	0.0% (0)
4. I am afraid of writing when I know it might be evaluated.	20.6% (7)	**44.1% (15)**	8.8% (3)	26.5% (9)	0.0% (0)
5. My mind seems to go blank when I start writing.	17.6% (6)	**61.8% (21)**	2.9% (1)	17.6% (6)	0.0% (0)
6. Expressing my ideas through writing is a waste of time.	38.2% (13)	**47.1% (16)**	11.8% (4)	0.0% (0)	2.9% (1)
11. I'm nervous about my writing.	15.2% (5)	**60.6% (20)**	9.1% (3)	15.2% (5)	0.0% (0)
14. I never seem to be able to write down my ideas clearly.	24.2% (8)	**48.5% (16)**	12.1% (4)	12.1% (4)	3.0% (1)
15. I'm not a good writer.	23.5% (8)	**52.9% (18)**	8.8% (3)	14.7% (5)	0.0% (0)
19. I don't think I write as well as most people.	11.8% (4)	**44.1% (15)**	20.6% (7)	14.7% (5)	8.8% (3)

DISCUSSION

Participants' responses seemed to reflect an overall enjoyment of writing and a generally positive view of themselves as writers. These results indicate that participants were approaching graduation with the efficacy that should facilitate the teaching of writing in a positive light. The literacy courses focus on teaching the writing process, modes of writing, and the art and craft of writing. It can be postulated that the instructors of these methods courses were successful in teaching these preservice teachers how to meet these objectives with their students while also focusing on differentiating instruction, and helping to connect the preservice teacher's personal views of writing with the teaching of writing.

While this is an essential beginning, it should also be noted that participants were most hesitant about publicly sharing their written products and seemed most ambivalent about their feelings related to other's participation in and reaction to their writing. Combined, these results may indicate limited experience discussing and/or sharing their writing with classmates and peers throughout their education for the purpose of honing their craft as writers. An audience's response to an individual's writing plays an important part in shaping the view that person has of himself as a writer as well as providing motivation for future writing (Tunks & Giles, 2007).

Preservice teachers' probable lack of prior positive, collaborative experiences as they progress through the stages of the writing process makes it even more critical that such experiences are a part of their teacher preparation programs, most likely embedded in methodology courses. It is the connection between one's efficacies regarding the act of writing to the actual teaching of writing that must become a primary focus of preservice preparation. Critical to the process is the engagement of the Gradual Release of Responsibility Model (Pearson & Gallaher, 1983; Harvey & Goudvis, 2005) in university coursework. Initially, *modeling* of the flexible use of interactive process writing through publishing is vital in order for preservice teachers to gain the skills, abilities, and attitudes required. This must be followed with *guided practice*, whereby the instructor leads the preservice candidates in writing and sharing, along with *collaborating* with their peers for feedback, and working independently. Teacher educators should structure the opportunities for the preservice candidates to *share their learning* as a group, to become public authors. This process will help prepare them to provide the same type of scaffolded experiences for their future students and feel more prepared and confident to do so.

LIMITATIONS

There are several limitations that should be considered when interpreting the results of this study. Using a convenience sample of a small size limits the generalizability of the findings because there is no assurance that the participants reflect characteristics of the entire population of preservice teachers. Further, data was collected through self-report methods. It should be noted that while it is possible that participants may have been tempted to respond as they deemed was expected, this risk is perceived as minimal since the survey was completely anonymous.

CONCLUSION

As schools strive to meet the challenge of improving student writing, teacher educators must provide opportunities for preservice teachers to improve their attitudes toward writing and confidence as writers through the courses they take in their teacher preparation programs. In the area of writing instruction, the self-confidence of preservice teachers is significant because writing is often not an activity that naturally encourages confidence in one's own abilities (Mayher, 1990). By better understanding the role of preservice teachers' attitudes about and experiences with writing, teacher education programs can assist preservice teachers in confronting, and possibly changing, negative writing attitudes brought with them to the university (Street, 2003). Just as developing a community of writers is important in the elementary classroom (Kent, 2012), it is also critical to develop a community of writers with preservice teachers. Teacher educators must develop experiences, both in the coursework and supported in field experiences, that scaffold the preservice teachers opportunity to develop into confident writers, who are then confident in their abilities to teach writing. Through these opportunities, preservice teachers becoming new teachers will likely be more self-assured in teaching writing to their students. The combination of knowledge, skills, and abilities related to the writing process and open, healthy attitudes toward writing will enable future teachers to give their students greater opportunities to excel in writing and communicating in this Information Age.

FUTURE RESEARCH

Examining the longitudinal impact of preservice teachers' attitudes regarding writing and their confidence in teaching writing with their attitudes and confidence as inservice teachers is an important step in establishing transfer between preservice preparation and their role as a professional. In addition, it is important to research the connection between reported attitudes about writing and view of one's self as a writer on the actual teaching of writing, and ultimately, student achievement.

In order to triangulate the data and verify self-report information, using multiple data sources to examine preservice (and inservice) teachers' writing attitudes is critical, especially given the limitations of self-report survey data. This could include observation, focus groups, and teacher evaluation by an administrator. These additional sources of data would help to strengthen the research design.

Finally, teacher education programs need to determine what assignments and practices, both in class and field-based, directly positively impact preservice teachers' attitudes toward writing, writing abilities, and view of themselves as both writers and writing teachers. By determining the most effective contributions to preservice teachers' writing development, institutions of higher education can ensure that their programs are providing preservice teachers with

The opportunities and experiences needed to improve writing instruction in elementary classrooms.

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Development of a Mixed Methods Approach to Describe and Measure Culturally Responsive School Practices

Lauren Shure, Ph.D.[1], Shana Ritter[2], Renae Azziz, Ed.S., NCSP[3], Russell Skiba, Ph.D.[4], Cassandra Cole, Ed.D.[5], Laura V. Middelberg, Ph.D.[6], Adam Sheya, Ph.D.[7]

[1]Barry University, 11300 NE 2nd Avenue, Miami Shores, FL 33161
lshure@mail.barry.edu
[2]6700 S. Church Rd. , Bloomington, IN 47401
shana747@gmail.com
[3]Virtuoso Education Consulting, 9450 East Raymond Street, Indianapolis, IN 46239
razziz@virtuosoed.com
[4]Center for Evaluation and Education Policy, Indiana University, 1900 East Tenth Street, Bloomington, IN 47406
skiba@indiana.edu
[5]Center on Education and Lifelong Learning, Indiana Institute, Indiana University, 1905 North Range Rd, Bloomington, IN. 47408
cmcole@indiana.edu
[6]902 East 54th St, Austin, TX 78751
Lvmiddel@indiana.edu
[7]406 Babbidge Road, Storrs, CT 06269-1020
adam.sheya@uconn.edu

Abstract: Racial and ethnic disparities, including disparities in discipline, are pervasive and long standing (Ladson-Billings, 2006; National Research Council, 2002; Skiba & Rausch, 2006; Wald & Losen, 2007). Research has shown culturally responsive (CR) practice to be an important strategy in addressing the disproportionate representation of culturally and linguistically diverse students in achievement and discipline (Klingner, Artiles, Kozleski, Harry, Zion, Tate, Durán & Riley, 2005; Vincent, Randall, Cartledge, Tobin & Swain-Bradway, 2011; Voltz, Brazil & Scott, 2003). CR practice emphasizes the importance of understanding the impact culture has on both academics and social behaviors at school. This paper reports upon a mixed methods approach used to develop two paired tools designed to describe and assess the implementation of CR practice at four public K-12 schools, the Cultural Responsiveness Assessment (CRA) and the CR Walkthrough. Results of this study indicate that when used together, these tools provide information useful to assist school leadership teams in reflecting upon CR practices being implemented at their schools and developing action plan goals and strategies to improve CR practice.

Racial and ethnic disparities, including disparities in discipline, are pervasive and long standing (Ladson-Billings, 2006; National Research Council, 2002; Skiba & Rausch, 2006; Wald & Losen, 2007). In order to address these disparities, many education researchers and scholars regard the consideration of race and culture, and the development and implementation of culturally responsive (CR) practices, integral to increasing the efficacy of educational practices for all students (Gay, 2000; Gregory & Mosely, 2004; Ladson-Billings, 2001; Nieto, 1999; Sleeter & McLaren, 1995). One issue that emerges, however, is how to identify CR practices and measure the impact those practices have on changing the school environment to benefit all groups of students (Banks, Cookson, Gay, Hawley, Irvine, Nieto, Schofield & Stephan, 2001).

The purpose of this study is to explore the extent to which a mixed methods approach, utilizing both survey methodology and qualitative observation, can provide a comprehensive approach to assessing culturally responsive practice in school settings.

Theoretical Framework

Research has shown culturally responsive practice to be an important strategy in addressing the disproportionate representation of culturally and linguistically diverse students in achievement and discipline (Klingner, Artiles, Kozleski, Harry, Zion, Tate, Durán & Riley, 2005; Vincent, Randall, Cartledge, Tobin & Swain-Bradway, 2011; Voltz, Brazil & Scott, 2003). Culturally responsive practice emphasizes the importance of understanding the impact culture has on both academics and social behaviors at school. Education research shows that children learn best when their culture and language are reflected in the school's curriculum (Gay, 2000; Ladson-Billings, 1995; Nieto, 1999; Tatum, 2003). Becoming adept in implementing culturally responsive pedagogy is a developmental process which includes: awareness of one's own culture and the culture of others, knowledge of cultural norms and values, skill in applying that knowledge to instructional practices and classroom management, and effective communication with families and communities (Ladson-Billings, 1995; Villegas & Lucas, 2002; Weinstein, Tomlinson-Clarke & Curran, 2004).

The complexity of culturally responsive practice includes the interaction of culture, climate, teaching and learning, data based decision making, and community and family relations. The multidimensional aspect of culturally responsive practice necessitates assessing CR across educational domains. Therefore, to best measure the multi-dimensionality of culturally responsive practice assessment tools that encompass multiple educational domains and utilize a variety of methods including surveys and observations are necessary to capture the complexity of CR practices. The need for tools to better assess culturally responsive practices are an important aspect of furthering schools' abilities to meet the needs of all students (Klingner et al., 2005).

Methods

The first step of the study was to develop tools to assess culturally responsive practices across five educational domains (1) Curriculum and Instruction, (2) Assessment and Accountability, (3) Family and Community Engagement, (4) Professional Development, and (5) Environment.

The Cultural Responsiveness Assessment (CRA)

The CRA is a survey administered to professional school staff to measure their perceptions of what culturally responsive practices are currently in place at their school. An overview of the content addressed across each educational domain, as well as empirical evidence and scholarly support for this content is summarized below.

Curriculum, instruction, and classroom management. Implementation of culturally responsive instruction requires educators to build upon the cultural knowledge, background experiences, and learning preferences of culturally diverse students in order to make instruction relevant (Gay, 2000; Ladson-Billings, 1995). Culturally responsive instruction relies upon the teacher's ability to reshape traditional curricula in order to infuse aspects of diverse perspectives through the curriculum. Morey and Kilano (1997) suggest that educators move from relying on curriculum that is exclusive and represents mainstream perspectives, to transformative curriculum, which challenges traditional views and encourages higher order thinking and self-reflection.

Assessment and accountability. In an effort to increase the level of accountability of schools in ensuring that the needs of all students are met, the use of data to guide decision making and action planning has become a consistent practice in the school improvement process. Purposeful analysis of data allows schools to identify strengths and areas of need regarding student skills and allows educators to refine their practices to be responsive to those areas of need. Much has been written to highlight the benefits of using data to address disparities in both academic and disciplinary practices (Skiba, 2008; Gibb, 2008; Johnson, 2002). Using data to promote equity

requires schools to disaggregate data across relevant subgroups and consider the relevancy of culture on observed data trends. Analysis of data at this level allows schools to develop hypotheses about the disparities that may be indicated across subgroups and develop action plans to specifically address the identified areas of challenge.

Family and community engagement. The impact that successful partnerships between schools and families have on student outcomes is well documented (Epstein, 2001; Christenson, 2001). When families and schools find meaningful ways to collaborate, student outcomes in both academics and discipline improve (Henderson & Mapp, 2002). Best practices in establishing successful partnerships focus on the implementation of ongoing two way communication with families, establishing opportunities for parent support of student learning at school and at home, and developing collaborations with communities that support families.

Professional development. In recent years, providing ongoing professional development opportunities for educators has become a common approach for ensuring that teachers remain abreast of the most recent research around best practices in teaching and learning. There is a substantial amount of literature about the characteristics of effective professional development opportunities (Guskey, 2009). Professional development that leads to sustainable practices is characterized by: (1) information dissemination through discussions, readings, and lectures, (2) explicit demonstration or modeling of a set of skills, strategies, and opportunities for teachers to practice, and (3) opportunities for teachers to receive feedback and coaching regarding implementation of the skills taught (Bean, 2004).

However, professional development must not focus solely on current strategies related to instruction and classroom management. It must also provide opportunities for teachers to reflect on the role that culture has on learning and behavior (Van Broekhuizen & Dougherty, 1999). Professional development focused on the development of teachers' awareness, knowledge, and skills in the area of culturally responsive practice begins with activities that support them in developing self-awareness about their own cultures, values, and beliefs. Subsequently, culturally responsive practice can be enhanced through professional development that deepens the understanding of the dimensions of culture that impact perceptions of behavior in the school environment (i.e. differing communication styles, response styles, social interaction preferences, and ways of handling conflict (Ladson-Billings, 1995, 2001; Weinstein, Tomlinson-Clarke & Curran, 2004; Villegas & Lucas, 2002).

Environment and school climate. Positive school environments/climates have been correlated with several student outcome indicators of success. Research indicates that schools with more positive school climates have lower dropout rates, fewer disciplinary concerns and incidences of violence, and higher rates of student achievement (Ruus, Veisson, Leino, Ots, Pallas, Sarv & Veisson, 2007). The National School Climate Council identifies four major areas that schools should focus on in their efforts to evaluate the effectiveness of their climates. Those four areas include: (1) safety, (2) relationships, (3) teaching and learning, and (4) the external environment. In addition to assessing the level of effectiveness across those four domains, schools should evaluate their school climates with purposeful considerations regarding the ways in which the environment/climate specifically impacts culturally and linguistically diverse students. Schools should reflect on the degree to which relevant languages are used in signage and written communication and representations of the cultures of the school community are visible throughout the school environment.

In order to capture the essential elements in each domain of the CRA, as suggested by the research base, participants responded to a variety of questions as summarized in the Table 1.

Table1: Sampling of Question Content Across CRA Domain Areas

Domain	Content of Questions
Curriculum, Instruction, & Classroom Management	• Includes items focused on adapting practices to address student's needs, abilities, interests, and learning styles.
Assessment & Accountability	• Includes items addressing the use of student data disaggregated by race/ethnicity to consider issues of disproportionality.
Family & Community Engagement	• Includes items which assess the various ways schools communicate with families and involve them in school events, decision-making, and student learning.
Professional Development	• Includes items assessing the consistency and methods by which educators develop awareness, knowledge, and skills in the areas of culturally responsive practices.
Environment & School Climate	• Includes items assessing the school climate, including use of relevant languages and visible representation of the cultures of the school community.

The Cultural Responsiveness (CR) Walkthrough

The Cultural Responsiveness (CR) Walkthrough is an ethnographic field observation tool to assess culturally responsive practice across the same five domains as the CRA. While the CRA assesses practitioner perceptions of which CR practices are in place, the CR Walkthrough assesses which, and to what degree, the same CR practices are actually being implemented. The CR Walkthrough is conducted by researchers with an extensive knowledge base of CR theory and practice in the five domains. The CR Walkthrough was developed with key observable indicators of CR practice in each area. Researchers observed classrooms and common areas such as hallways and cafeteria, interviewed administrators, students, teachers and family liaisons and reviewed relevant documentation. Below is a sample of the key observable indicators in each of the five areas.

Table 2: Sampling of Indicators Across the Five Domains

Domain	Observable Indicators of CR Practice	Observation Source
Curriculum, Instruction, & Classroom Management	• Instructional strategies and teaching styles are frequently varied to meet the needs of all learners. • The students' culture is incorporated into instructional materials.	• Classroom observation, • School improvement plan, Lesson plans
Assessment & Accountability	• Assessment data is disaggregated by race/ethnicity, language, and IEP status. • Assessment data is consistently used to inform instructional practice.	• Data wall, Focus groups, Interviews
Family & Community Engagement	• A system is in place to determine family preferences for ongoing communication. • Some family events are held off site in the community.	• School improvement plan, Focus groups, Family survey
Professional Development	• Professional development activities are culturally relevant to the lives of students at the school. • Professional Development enhances teacher skill in integrating culturally relevant materials into the content areas.	• School improvement plan, Documentation of PD, Focus groups, Interviews
Environment & School Climate	• Information, students work, and other materials displayed around the building represent the cultures of the school community. • Signs and labels around the school are in relevant languages.	• Observation in hallway, classroom, entryways, office, and library

Phase One

Initial validity and reliability testing was conducted from the piloting of the CRA across seven sites with 720 professional school staff. This included a principal components factor analysis. Secondly, Cronbach's Alpha was computed for the CRA overall and for each subscale of the CRA found through factor analysis.

Phase Two

In order to gain a deeper understanding of the assessment of culturally responsive practice, the second phase of the study uses a mixed-methods case study approach (Creswell & Plano Clark, 2007) to describe and measure culturally responsive practice at four schools. The four schools in this phase of the study participated in both the CRA and the CR Walkthrough.

The CR Walkthrough was conducted by outside researchers at each school site. The ethnographic field observation tool includes classroom observations, interviews, descriptors of school climate and environment, and review of documents across the five educational domains.

Peer examination and member checking was utilized to begin establishing credibility of the CR Walkthrough. At least two researchers assessed each school using the CR Walkthrough. Member checking consisted of a discussion of the results with a school leadership team of 8 – 12 school staff at each site. Qualitative descriptive data gathered from the CR Walkthrough by members of the research team will be used to further describe and explain the culturally-responsive practices at each school.

Differences in mean subscale scores of the CRA across schools will be examined through one-way ANOVA analysis with posthoc follow-up testing, as needed. Qualitative data from the observations, interviews, and documents collected through the CR Walkthrough administration will be used to complete the mixed methods description of culturally responsive practices at each school and any significant differences in culturally responsive practices found across schools.

Data Sources

Phase one participants included 720 educators including; teachers, building and central office administrators, and related professional services personnel from seven school districts in different geographical areas in a Midwestern state.

In phase two, staff at four public schools comprised the case study participants. Demographic information for the certified staff and students during the 2010-2011 school year at these schools can be found in the table below. The data was collected during the 2010-2011 school year.

Table 3: Demographic Information for Case Study Schools (2010-11)

	CRA respondents	# of certified school staff	Racial/ethnic breakdown of school staff	Setting of school	Grade levels	Student population	Racial/ethnic breakdown of students
School one	n=31	31	White=94% African American=6%	Urban	K-5	457	White=48% African American=25% Multiracial= 24% Latino=3%
School two	n=15	32	White=100%	Rural	K-6	634	White=63% Latino=32% Multiracial= 3% African American=1% Native American=<1%
School three	n=29	32	White=94% African American=6%	Urban	K-4	429	African American=62% White=13% Latino=13% Multiracial= 11% Asian=1% Native American=<1%
School four	n=36	40	White=100%	Rural	6-8	561	White=86% Latino=7% Multiracial= 4% African American=2% Native American=<1%

Results

Factor Analysis

A principal components analysis was conducted to establish validity of the CRA. On the basis of a scree test, an approximate solution of five factors was indicated. Principal components solutions of four and five factors were considered. The five-factor solution accounting for 61.65% of the total variance was judged to yield the most

interpretable solution. A principal components factor analysis identified the following five factors, used as subscales: (1) Student-centered learning, (2) Examination of disaggregated data, (3) Family and community engagement, (4) Professional development, and (5) Additional culturally-responsive factors. (1) *Student-centered learning* includes items focused on adapting practices to address student's needs, abilities, interests, and learning styles (Ladson-Billings, 1995). (2) *Examination of disaggregated data* includes items addressing the use of student data disaggregated by race/ethnicity to consider issues of disproportionality. (3) *Family and Community Engagement* includes items which assess the various ways schools communicate with families and communities and involve them in school events, decision-making, and student learning. (4) *Professional development* includes items assessing the consistency and methods by which educators develop awareness, knowledge, and skills in the areas of culturally responsive practices. (5) *Additional culturally responsive factors* include items assessing the school climate, including use of relevant languages and visible representation of the cultures of the school community.

Reliability of CRA

Internal consistency, as calculated by Cronbach's Alpha was .936 for the CRA overall. Cronbach's Alpha for the five subscale factors as dictated by the factor analysis are as follows: Student-Centered Learning Practices: .860, Examination of Disaggregated Data: .758, Family and Community Engagement: .837, Professional Development: .916, and Additional Culturally-Responsive Factors: .711.

CRA ANOVA Results

Using a one-way analysis of variance (ANOVA), significant differences across schools on the CRA were found on the following domains: Curriculum, Instruction and Classroom Management ($F=5.563$, $p=.001$), Family and Community Engagement ($F=3.017$, $p=.033$), Professional Development ($F=3.238$, $p=.025$), and Environment and School Climate ($F=9.638$, $p=.000$). No significant differences were found on the Assessment and Accountability ($F=1.204$, $p=.312$) domain. Post-hoc testing using a Bonferroni correction found no significant differences across schools on the Professional Development domain and the following significant differences across schools:

- Curriculum, Instruction, and Classroom Management:
    - Staff at School One and School Two rated CR practices within the Curriculum, Instruction, and Classroom Management domain to be implemented at a higher level than staff at School Four rated these practices at their school ($p=.033$ and $p=.003$, respectively).
- Family and Community Engagement:
    - Staff at School One rated CR practices within the Family and Community Engagement domain to be implemented at a higher level than staff at School Four rated these practices at their school ($p=0.026$).
- Environment and School Climate:
    - Staff at School Two rated CR practices within the Environment and School Climate domain to be implemented at a higher level than staff at School One and School Four rated these practices at their school ($p=.003$ and $p=.000$, respectively).
    - Staff at School Three rated CR practices within the Environment and School Climate domain to be implemented at a higher level than staff at School Four rated these practices at their school ($p=0.006$).

CR Walkthrough and Case Study Results

School one. ***Curriculum, instruction, and classroom management.*** The results of the CRA show that staff at School One rated their level of CR practices in curriculum, instruction, and classroom management to be at a significantly higher level than at School Four (M=3.55; SD=0.65 and M=3.07; SD=0.66, respectively). This is not directly supported by the results of the CR Walkthrough. Like all of the schools in this study, the level of CR practices varied greatly across classrooms. For example, one classroom at School One was observed instructing a lesson using teacher lecturing in front of the classroom with students seated individually in rows taking notes directly from an overhead projector. This was a U.S. history lesson in which students copied dates of wars and other events related to the independence of the United States from Great Britain. A number of times students began talking and were asked to be quiet and continue copying notes from the overhead.

In another classroom, students seated at desks set into one large rectangle were engaged in creating their own "designer" dinosaurs. The teacher circulated among the students and made individual comments on each drawing. The comments indicated high expectations for student work, encouragement, and higher order thinking skills. For example, the teacher asked the difference between the dinosaurs drawn from their imagination and the depictions of dinosaurs studied with scientific background. This lesson illustrated a classroom that was student centered, developmentally appropriate, and strength based-elements of culturally responsive practice. All students appeared to be engaged in the lesson.

Interviews with the principal indicate that refinement of an academic assessment process is currently underway.

Assessment and accountability. State-mandated test score results (ISTEP) from the 2010-11 school year disaggregated by race/ethnicity show the following groups of students passing both the English Language Arts (ELA) and mathematics portions of the test: White=73.7%, Multiracial=54.8%, and Black=29.3%. The principal reports that benchmarking and formative achievement tests are used for academic assessment along with state-mandated testing. The proportion of gifted/talented placement by race/ethnicity is not known because this program is housed in another school within the district.

Family and community engagement. The results of the CRA show that staff at School One rated their level of CR practices in family and community engagement to be at a significantly higher level than at School Four (M=2.90; SD=0.77 and M=2.33; SD=0.82, respectively). This is supported by the results of the CR Walkthrough and viewed as a strength at this school. Staff at School one conduct home visits with each student's family that is interested at the beginning of the school year. In addition, neighborhood visits are done, in which staff come to the students' neighborhoods to talk with students and families and answer questions and provide information about the school. Other family events occur throughout the year. Some of these events are held off campus in the community. This includes a Skate Night at a local roller skating rink and an evening at a minor league baseball game in which low cost or no cost tickets are made available to students and their families. One area for improvement in CR practices in this area would be to create a system to determine family preferences for communication with the school, as one does not currently exist.

Professional development. The Positive Behavioral Interventions and Supports (PBIS) team is engaged in professional development focused on increasing cultural awareness, knowledge, and skills. This includes a book study using Gloria Ladson-Billing's book, *Dreamkeepers*. The staff has also participated in a number of professional development sessions on topics such as: CR classroom management, CR practices in curriculum and

instruction, and family engagement. The PBIS team has shown a willingness to discuss issues of race, culture, and equity. However, in their attempts to share this information with the rest of the school staff, resistance was met. The principal bought a copy of *Dreamkeepers* for each staff member. The PBIS team initiated a book study in their grade level teams. This initiative was stalled because many staff were not reading the book and the principal notes conflict amongst staff members that she attributed to the resistance around reading and discussing the book.

Environment and school climate. The results of the CRA show that staff at School One rated their level of CR practices in environment and school climate to be at a significantly lower level than at School Two (M=3.10; SD=0.78 and M=3.92; SD=0.64, respectively). This was not directly supported by the CR Walkthrough. Posters and other information posted on the building walls depict students who appear to be from a diversity of backgrounds. However, there were no depictions of diverse leaders or other figures and no depictions of actual students or families or other representations from the community. The mascot for School One is a stereotypic Native American representation of a red-skinned person wearing a headdress with feathers and a painted face. When this was brought to the attention of the principal and PBIS team, these stereotypical depictions were removed from the building and the reward system was changed from using "feathers" to using "tickets." The school website still includes stereotypical images.

English Language Learner (ELL) students are offered services in another school within the district. There is no evidence for the use of bilingual staff or materials at School One.

Planning periods are utilized for grade level team collaboration. However, like all of the schools in the study, the principal does not direct the meetings or know what occurs during them. She does not collect notes from these meetings either. Therefore, it is unclear if this collaboration time is used to implement best practices for teaching culturally and linguistically diverse students.

Action planning. Areas of focus for discussion with the PBIS team for use in action planning were curriculum, instruction, and classroom management and environment and school climate. The results of this discussion were the decision to use *Dreamkeepers* in a book study with the entire staff at the grade level meetings and other professional development sessions focused on CR classroom practices. Actions were taken to eliminate the stereotypical depictions of Native Americans from school practices. Additionally, goals were set for the school to establish and maintain consistent reporting of disaggregated discipline data.

School two. ***Curriculum, instruction, and classroom management.*** The results of the CRA show that staff at School two rated their level of CR practices in curriculum, instruction, and classroom management to be at a significantly higher level than at School Four (M=3.84; SD=xx and M=3.07;SD=xx, respectively). Classroom observations were not possible at School Two because of a mandate by the teacher's union that permission for any classroom observations be cleared ahead of time through the union. Therefore, it is unknown whether this perception of higher levels of CR practice in the classroom would be supported by direct observation.

Interviews with the principal and other school staff support the presence of a well-defined academic assessment process which attends to individual student strengths but not to cultural or family strengths.

Assessment and accountability. There were data walls present in the literacy coach's classroom and in the staff meeting room. State-mandated test score results (ISTEP) from the 2010-11 school year disaggregated by race/ethnicity show the following groups of students passing both the English Language Arts (ELA) and mathematics portions of the test: White=65% and Latino=44.4%. The principal reports that benchmark testing is

conducted three times per year and formative academic assessments are also used in addition to the state-mandated tests. The proportion of gifted/talented placement by race/ethnicity is not known because this program is housed in another school within the district.

Family and community engagement. Almost one third of the students at School Two are native Spanish-speaking ELLs. A bilingual parent liaison is on staff full time. This person translates materials for families and interprets when families come to school for meetings. There is no system in place to determine family preference for communication with the school and no family events are held off campus. A family member of a student and a community member participate regularly on the school improvement committee. A family member also participates regularly on the PBIS team.

Professional development. Based on a review of disaggregated discipline data, professional development sessions geared toward improving this data were planned. These included sessions on the successful educational engagement of boys and working from a strength-based perspective with students in poverty. Believing there was a disconnect between the school and many of the ELL students' families, a workshop was also conducted in developing awareness and understanding of the culture and experiences of Latino students and families.

Environment and school climate. The results of the CRA show that staff at School Two rated their level of CR practices in environment and school climate to be at a significantly higher level than at School One and School Four (M=3.92; SD=0.64, M=3.10; SD=0.78, and M=2.79; SD=0.76, respectively). This was not directly supported by the CR Walkthrough. The building walls display a lot of student work and appear to be student-centered. Signs for the schoolwide expectations and location specific rules are displayed in English and in Spanish. Several inspirational signs and banners are also displayed around the school. However, none of these inspirational signs are in Spanish. Only the rules are translated into Spanish. Bilingual staff or interpreters are utilized during assessments, interventions, and family events.

Grade level teams meet at least one time per week and some meet once per day. The principal does not direct the meetings or know what occurs during them. She does not collect notes from these meetings either. Therefore, it is unclear if this collaboration time is used to implement best practices for teaching culturally and linguistically diverse students.

Action planning. Areas of focus for discussion with the PBIS team for use in action planning were family and community engagement and environment and school climate. The discussion focused on how Latino families and other families not often present at the school could be better engaged and made aware of PBIS and other school activities. An action plan item of "expanding parent awareness and increasing communication through PBIS" was established. As a result, a bilingual information sheet on PBIS that could be used as a refrigerator magnet in students' homes was designed by staff and distributed to families. The school hosted a family carnival in the fall, and there are funds set aside to plan other family celebrations and events.

The rest of this discussion focused on how Spanish-speaking students and families may interpret the fact that only the signs with school rules were translated into Spanish. The discussion included the idea that Spanish-speaking students and families could be engaged in creating inspirational signs that represent their cultural norms and use sayings and messages that are meaningful for them. To date, this has not occurred.

School three. ***Curriculum, instruction, and classroom management.*** The level of CR practices varied greatly across classrooms. One classroom allowed students to choose what activity they would like to engage in from a variety of hands-on activities in "rotating stations." Another class involved didactic teaching followed by

student participation to teach students synonyms and antonyms. It was clear that some students understood while some students did not, as evidenced by student responses to teacher questions. The instruction style did not seem to be modified to engage learners who were not engaged and those students who were not able to produce correct answers and did not seem to understand the concept.

Interviews with the principal and other school staff support the presence of a well-defined academic assessment process which attends to individual student strengths but not to cultural or family strengths.

Assessment and accountability. There was a data wall present in the literacy coach's classroom. State-mandated test score results (ISTEP) from the 2010-11 school year disaggregated by race/ethnicity show the following groups of students passing both the English Language Arts (ELA) and mathematics portions of the test: White=81.3%, African American/Black=59.8%, Latino=59.1%, and Multiracial=57.1%. The proportion of gifted/talented placement by race/ethnicity is not known because this program is housed in another school within the district.

The principal produced an academic data report with several benchmark and other academic assessment data used by the Response to Intervention (RtI) team. The RtI team reportedly meets one time per month to monitor and develop interventions. This data along with discipline data is reviewed once per week at schoolwide staff meetings. It is unclear whether RtI team discussions and interventions incorporate students' individual, family, and cultural strengths.

Family and community engagement. There is no system in place to determine family preferences for communication with the school and no family events are held off campus. Title I family events are held each semester on campus, as are other school events, such as movie nights and grandparent breakfasts. The school does have multiple methods of communicating with families in a unidirectional way, including: phone messages, newsletters, and a website.

Professional development. The PBIS team is engaged in book discussion with excerpts from the book, *Everyday Anti-racism*. The principal has purchased several other books focused on culturally responsive school practices and made them available to all staff. The school staff has participated in some professional development focused on improving family engagement and increasing cultural awareness.

Environment and school climate. The results of the CRA show that staff at School Three rated their level of CR practices in environment and school climate to be at a significantly higher level than at School Four (M=3.40; SD=0.66 and M=2.79; SD=0.76, respectively). This is supported by the CR Walkthrough and viewed as a strength at this school. Posters and other images on the building walls depict a diversity of leaders, community members, and student work.

English Language Learners (ELLs) are offered services in another school within the district. There is one secretary who is bilingual in English and Spanish. No other evidence for the use of bilingual staff or materials at School One exists.

The principal reports that grade level teams have various ways of collaborating. Some teams meet weekly to plan lessons together and put out a grade level newsletter to families, while some teams meet less formally and one grade level team is currently in process of developing a system for collaboration.

Action planning. Areas of focus for discussion with the PBIS team for use in action planning were curriculum, instruction, and classroom management and family and community engagement. Action plan goals to "improve staff understanding of cultural responsiveness and improve family-school connections" were

established. This discussion mainly focused on how the incorporation of multiple perspectives and cultures are currently being utilized in teaching and learning. Several team members reported that they have incorporated new materials, particularly in reading and language arts, in order to include multiple perspectives and experiences in the curriculum. All staff will be invited to participate in an after school book club with two books focused on culturally responsive school practices. Staff will be compensated financially for their time. The books used in this activity will be provided for all staff. Family and community engagement was not discussed as in depth nor were any action strategies or steps created.

School four. ***Curriculum, instruction, and classroom management.*** The level of CR practices varied greatly across classrooms. One classroom included student choice in the curriculum. Students were allowed to choose which computer program to use to create a presentation for the class on "waves." In a math class, students brought in suggestions for websites with math games to be used in class. One history classroom has posters of Sitting Bull, Gandhi, and Dr. Martin Luther King, Jr. posted on the walls. The teacher stated that he teaches history from multiple perspectives. In another history class, a teacher is observed telling a student, who asked her why all of the people they were learning about were white, that "it doesn't matter" what race the historical figures she teachers him about are and asked him why he cares.

Assessment and accountability. A well-defined academic assessment process is in place. Academic data is used to identify students needing extra support for targeted interventions. The referral form for this process includes documentation of student strengths, as well as home and community interventions that have been used. State-mandated test score results (ISTEP) from the 2010-11 school year disaggregated by race/ethnicity show the following groups of students passing both the English Language Arts (ELA) and mathematics portions of the test: White=65.2%, Latino=55.3%, and Multiracial=50%. Academic data is not disaggregated at the school level, and it is unknown what the racial/ethnic proportions of gifted and talented programs are at the school.

Family and community engagement. There is no evidence that a system for determining family preferences for ongoing communication is in place. Likewise, there was no evidence that specific efforts to involve families who generally have low participation rates are currently were occurring. No family events have been held off campus. A district initiative aligns with local businesses to provide each student at the school with a laptop computer. Besides the Parent Teacher Organization (PTO), there is no evidence of any programs or opportunities for community or family involvement in educational decision-making through the school.

Professional development. Professional development focusing on issues of culture has not occurred for school staff. There has been some discussion about this in PBIS team meetings.

Environment and school climate. Student work is displayed around the building. Some classroom walls depict leaders and heroes from a diversity of cultures and countries. However, this varied from classroom to classroom.

Teachers meet regularly, but there is no direct evidence that this time is used to collaborate to implement best practices for teaching culturally and linguistically diverse students.

English Language Learners (ELLs) are offered services in another school within the district. There is no evidence for the use of bilingual staff or materials, except for two posters in Spanish posted in the building. One designates the school as a safe place and the other asks "Do we have homework?"

Action planning. Areas of focus for discussion with the PBIS team for use in action planning were curriculum, instruction, and classroom management and family and community engagement. The discussion

mainly focused on how the incorporation of multiple perspectives and cultures are currently being utilized in teaching and learning and if curriculum and instruction in the building is benefitting all students equally. The team acknowledged that staff needs more professional development focused on culturally responsive classroom practices. The questions of how two-way communication with families could be developed and how teachers can more effectively learn about and connect with families were also discussed.

Action plan items to: "improve parent-teacher communication through a variety of direct contact strategies," "develop a program to increase positive teacher communications with parents and students," "develop means to determine parent preference of communication, "develop and implement specific strategies to gain cultural knowledge from multiple groups of students and families," "develop means for multiple groups to have regular input to PBIS team," "increase staff awareness of culturally responsive practice through professional development and/or book study," and "increase communication with staff about culturally diverse students" were established. It is unclear how these goals are currently being addressed.

Table 4: Summary of Case Study School Areas of Strength and Areas for Improvement

	Area/s of Strength	Area/s for Improvement
School one	• Curriculum, Instruction, and Classroom Management (CRA) • **Family and Community Engagement (CRA & CR Walkthrough)**	• Curriculum, Instruction, and Classroom Management (CR Walkthrough) • **Environment and School Climate (CRA & CR Walkthrough)**
School two	• Curriculum, Instruction, and Classroom Management (CRA) • Professional Development (CR Walkthrough) • Environment and School Climate (CRA)	• Family and Community Engagement (CR Walkthrough) • Environment and School Climate (CR Walkthrough)
School three	• **Environment and School Climate (CRA & CR Walkthrough)**	• Curriculum, Instruction, and Classroom Management (CR Walkthrough) • Family and Community Engagement (CR Walkthrough)
School four	• Assessment and Accountability (CR Walkthrough)	• Curriculum, Instruction, and Classroom Management (CRA) • **Family and Community Engagement (CRA & CR Walkthrough)** • **Environment and School Climate (CRA & CR Walkthrough)**

Table 5: Summary of Trends Across Schools

Curriculum, Instruction, & Classroom Management	• Inconsistent implementation of CR practices in curriculum, instruction, and classroom management
Assessment & Accountability	• Inconsistent implementation of CR practices in assessment processes • Most schools would benefit from assistance in making meaning of disaggregated data
Family & Community Engagement	**School 1 area of strength**
Professional Development	• Most schools would benefit from PD in family engagement and CR curriculum, instruction, classroom management, and assessment
Environment & School Climate	**School 3 area of strength**

Discussion

Significance

The true merit of a tool to measure culturally responsive practices is found in an ability to guide the implementation of practices that will benefit all groups of students. Developing a rich picture of the relationship between how educators perceive culturally responsive practices at their schools and an external qualitative description of CR practices has the potential to advance current knowledge of how using tools to measure CR practices can guide action planning, professional development, and other school practices.

Initial validity and reliability testing of the CRA suggest it is a useful tool to assess culturally responsive practices in school settings. The mixed methods approach combining the self-report survey methodology of the CRA with the ethnographic field observation methodology of the CR Walkthrough allows for the comparison of perceptions of what CR practices school staff believe to be in place and an external observation of what practices are in place. While more data is needed, this may provide us with a means for deepening an understanding of the relationship between self-assessment of CR practices and what CR practices are being implemented.

Implications for Practice

The results of the CRA and CR Walkthrough provide information useful to assist school leadership teams, such as PBIS teams, in reflecting upon CR practices being implemented at their school and developing action plan goals and strategies to improve CR practices. The CRA provides information regarding staff perceptions of what CR practices are in place as well as what CR practices they rate as high priorities for improvement. The CR Walkthrough provides information regarding what CR practices are in place at each school.

Based upon data from the CR Walkthrough and what practices school staff rated as a high priority for improvement on the CRA, a report can be developed and discussed with leadership teams within a school. In the presented case studies, researchers discussed this report with the PBIS team and helped them develop action plan items to improve CR practice. The case studies described above explain how the results of these measures were used to guide action planning among school leadership teams to improve CR practices, impact student outcomes, and increase educational equity.

Future Research

It is unclear to what extent action plan items and strategies developed at each school will permanently change school practices. Thus, a future administration of the CRA and the CR Walkthrough will be useful to evaluate how perceptions of what CR practices are in place and what CR practices are actually in place at each school has changed. Additionally, examining the relationship between CRA and CR Walkthrough data with disaggregated academic and discipline data will provide us with information regarding the influence of CR practices on student outcomes.

Preliminary data suggests there is not a linear relationship between perceptions of what CR practices are in place and what CR practices are actually being implemented at the school level. This relationship may be curvilinear and explained by the relationship between participants' level of cultural awareness, knowledge, and skills. At schools where more CR practices are in place and, presumably, staff have higher levels of cultural awareness and knowledge, CRA scores may be skewed lower than at schools implementing fewer CR practices because lower levels of cultural awareness and knowledge may prohibit staff from fully understanding the complexities and breadth of CR practice implementation. More data is needed to explore this hypothesis and further validate the CRA and CR Walkthrough, both as separate tools as well as related assessments.

Lastly, further exploration on ways to more directly involve school staff teams and family and community in the CR Walkthrough is necessary. The possibility of stakeholders engaging in participatory action research (Brydon-Miller & Maguire, 2009) may offer a way to both increase buy-in and build capacity at the local level to augment CR practice and thereby address issues of equity in the schools.

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EMERGENCY CONTRACEPTIVES USE AMONG FEMALE STUDENTS AT AHMADU BELLO UNIVERSITY, ZARIA, KADUNA STATE

Kolawole, Taiwo Olabode (Correspondent Author)[1], Abubakar, M. Bashir[2], Zaggi, Hilary.[3]

[1]Department of Sociology, Federal University, Oye-Ekiti,
Kolawole1999@yahoo.com/ 07059307074
[2]Department of Sociology, Ahmadu Bello University, Zaria.
[3]Department of Sociology, Kaduna State University, Kaduna

Abstract: The empirical study investigated the issues surrounding emergency contraceptives and problems that characterized the use of EC among female students in tertiary institutions (Ahmadu Bello University, Zaria). The study primarily explores the knowledge of female students about EC, knowing fully that almost all the female students especially those that have engaged in pre-marital sex use it. Five (5) faculties were purposively selected for the study and a total of five hundred (500) female students were also selected for this study using accidental or grab sampling technique. The findings of the study mainly revealed that the knowledge of female students about ECs was not too encouraging because they don't know what to use and are not always ready/prepared for the usage any time they want to satisfy their sexual urge but rather engage in EC any time they have unprotected sex with their partners. It means the health sector has quite a number of intervention steps/work to do in terms of seminars/workshops, enlightenment, orientation and educating the students without which the attainment of the MDGs may be a tall dream in Nigeria and some of them may accidentally give birth to child that his/her father cannot be identified as a result of multiple sex partners and finally, there will be continuity in the spread of STDs.

Key words: Emergency contraceptive, contraceptives, unprotected sex, unwanted pregnancy and HIV/AIDS

Introduction;

The advancement in science and technology has restructured and redefine the way and manner people interact with things that pertains them. For instance, birth control. A lot of devices have been produced to reduce that rate at which people especially women reproduce at the detriment of their health. The issue of pre-marital sex is liken to a burning bush among youths globally. It is worthy of note, to mention that youths engage in pre-marital unprotected sex for several reason such as they don't enjoy sex when contraceptive is used, contraceptive is too expensive, it is far out of their reach to mention but few reasons. It is after the exercise that they run from pole-to-pole to use one thing or the other so that the unprotected does not result in unwanted pregnancy. Hence, this studies to investigate EC among students in tertiary institution.

Review of Literature:

Academic meaning of Emergency Contraceptives:

According to WHO (2005) define emergency contraceptive refers to back-up methods for contraceptive emergencies which women can use within the first few days after unprotected intercourse to prevent an unwanted pregnancy. Emergency contraceptives are not suitable for regular use. Emergency contraception is a form of birth control. You can use this method if you have had unprotected sex and are worried that you might get pregnant. For example, if your regular birth control fails (the condom breaks during sex), if you forget to take your birth control pills or if you have sex without using any birth control.

Also, it is the prevention of pregnancy after unprotected vaginal intercourse. Emergency contraception may use drugs related to the female hormones estrogen and progesterone. These "morning-after pill" are similar to birth control pills but generally contain higher hormone doses. Another form of emergency contraception uses an intrauterine device (IUD) inserted by a physician within 5 days after intercourse. Emergency contraception is also known as emergency birth control; emergency postcoital contraception; and postcoital contraception, (Dejene, Tsion and Tefera, 2010).

And finally, emergency contraception is a way to prevent pregnancy after unprotected sex. Often called the morning-after pill, emergency contraception pills (ECPs) are hormone pills that women can take after having sex.

There are different types of ECPs. One type, levonorgestrel (brand names: Plan B and Next Choice), has been on the market for a while. It works up to 72 hours after having unprotected sex. Emergency contraception or emergency birth control uses either emergency contraceptive pills (ECPs) or a Copper-T intrauterine device (IUD) to help prevent pregnancy following unprotected vaginal intercourse.

General Overview of Contraceptive

Globally, technological advancement has positively affected all spheres of live. In fact, it is important to note that some rural areas were not exempted but despite the technological progress in the health sector, especially in the area of modern contraception methods- its awareness, knowledge and use among people especially those in the tertiary institutions, unintended pregnancy is still a big problem in Nigeria. More than 60% of the pregnancies in adolescents are unintended; ones which result from contraception non-use, contraception method failure and rape, (Altankhuyagiin, 2007 and Joseph, 2003). The incidence of unintended pregnancy and unsafe abortion, particularly among adolescents, remains high. In Nigeria, abortion emanating from unintended pregnancy is one of the most significant causes of maternal morbidity and mortality; it is also a major medical and public health problem, (Dejene, Tsion and Tefera, 2010).

Currently, more and more young people especially students in both secondary and post-secondary schools engage in sexual activity before marriage often without using contraception or unprotected. Studies data have indicates that young women who are unmarried are increasingly sexually active before the age of 15 due to several factors such as undue exposure, environmental, poverty and even parental carelessness and lots more. Thus, unwanted pregnancy is one of the greatest problems a young girl can face; this poses major public health problems in the developed and developing countries, including Nigeria. Unintended pregnancy and early child bearing impacts negatively on the educational prospects of girls by forcing them to drop out of school (jeopardizing students' educational progress and future careers) because of the morbidity resulting from unsafe abortion when the pregnancy is unwanted, culminating in poor participation of girls in the overall socio-economic development of their communities and eventually their countries. This will make the MDGs a tall dream in the country, (Abama and Kwaja, 2009).

The use of emergency contraception (EC) will decrease the cost, the emotional and the physical risk experienced by women/ or girls of reproductive age who engage in early and unprotected sexual activity. EC refers to the type of contraception that is used as an emergency procedure to prevent unintended pregnancy following an unprotected act of sexual intercourse, wrongly and lately use or contraception failure.

Reports from developed countries show that the use of EC varies from place to place and the knowledge on correct use varies from 83% in Sweden to less than 60% in developing countries. One of the lowest percentages (10%) was observed in a study done in Nigeria at the Addis Ababa University and Unity University College, Nigeria on the knowledge, attitudes, and practices affecting the use of EC. Findings from several studies indicate that even women, who indicate that they know how to use EC, often report they have never used it, (Zeleke, Zebenay, and Weldegerima, 2009).

However, there are few studies which document the extent of emergency contraception use and the influencing factors on its use among university female students in Nigeria. This study was carried out for wholistic assessment of EC knowledge, meaning, use and its predictor factors and problems associated with EC among regular female students at Ahmadu Bello University, Zaria. We hope that our study will provide baseline data to assist policy makers in developing appropriate evidence-based strategies to promote the need based meaning, knowledge, use and implications of emergency contraceptive methods amongst eligible individuals in Nigeria.

Emergency contraception (birth control after sexual intercourse) is the use of a drug or device to prevent pregnancy after unprotected sexual intercourse. Emergency contraception can be used when a condom breaks, if a diaphragm or cervical cap slips out of place during intercourse, after a sexual assault, or any time unprotected intercourse occurs. Emergency contraceptive pills are sometimes called the "morning-after pill," but they are usually effective if taken within 72 hours of unprotected sexual intercourse.

Emergency contraceptives available in the United States include emergency contraceptive pills, which contain the same hormones found in birth control pills, and the Copper T380 intrauterine device (IUD). Both the Prevent kit and the Plan B kit are pills marketed as emergency contraceptive pills.

Emergency contraceptive measures can be taken within the first 72 hours after unprotected sexual intercourse to reduce the possibility of pregnancy. A woman is most likely to become pregnant if sexual intercourse occurs in the few days before or after ovulation (release of an egg from the ovary). Emergency contraceptives should not be used as a contraceptive method in women who are sexually active or planning to become sexually active. They are not as effective as any ongoing contraceptive method.

Methods:

This study was conducted in Ahmadu Bello University, Zaria. A cross-sectional study was conducted using all regular undergraduate female students of Ahmadu Bello University, Zaria as a source and randomly selected students as study participants. The sample size was 500 female students. A two-stage sampling approach was used; where first 5 faculties were selected purposively in Ahmadu Bello University, Zaria (faculty of Medicine, faculty

of Pharmacy, faculty of Natural Sciences, faculty of Social Sciences and faculty of Education). All existing and functioning department in all the selected faculties were represented. Then, the total sample size was allocated to each department proportional to the number of female students per department. Secondly, from each respective department, participants (female students) were purposively selected in their respective departments. Finally, 500 study participants who fulfilled the inclusion criteria were selected for the study. The questionnaires contain four parts namely; socio-demographic characteristics or data of the respondents, knowledge and meaning of emergency contraceptives, types of contraceptives known and use by the participants and problems of emergency contraceptives.

The first part assessed information on the socio-demographic characteristics of the participants for this survey which consisted of 8 questions. The second part assessed the knowledge and meaning of EC with 8 major questions. The questions were asked mainly in the form requiring "Yes", "No" response and with two open ended questions. The third part was on the types of contraceptives the participants have knowledge about and have ever used, a table was drawn itemizing the types of contraceptives by ticking even the types they have ever used, it also contain another table expecting the participants to list the types of EC they know, heard about and have ever use. The fourth part contained five open ended lines expecting the respondents to fill the bad effects of EC use.

Data were cleaned, checked for inconsistencies and missed values, coded and entered for analysis to SPSS (SPSS Inc. version 16.1., Chicago, Illinois). Bivariate analysis was used to see the unadjusted effects of each predictor. Variables that showed significant association in the bivariate analyses were fitted in to a multivariable logistic regression model to isolate the independent effects on EC use.

Ethically, privacy and confidentiality of information given by each respondent was maintained and names given were not recorded. With the help of assistants from students in Department of Sociology, the selected students were informed about the purpose of the study, the importance of their participation and verbal consent was obtained. Based on their willingness to participate in the study, they were provided with the questionnaire and oriented on how to fill the questions. After they had completed filling in the questionnaire they, each, returned it to the focal person attach to each faculty (i.e. the respondents returned their questionnaires in person).

All filled questionnaires were checked for completeness, accuracy, clarity and consistency by the facilitator and investigator. Necessary corrections and changes were made in time. All supervision by the principal investigator throughout the data collection was carried out. This was to help identify problems that had to be addressed both on the questionnaires and with the data collectors.

Result:

Students in five different faculties across all functioning departments participated in this survey. All the participants (100.0%) were females while 44.0% were females. Not less than 46.0% of the respondents were Christians, 52.0% practiced Islam while 2.0% did not respond to the question. Most of the participants 90.0% were single and 10.0% were married.

Table 1: Whether Respondents have ever heard about Emergency Contraceptives

Option	Frequency	Percentage (%)
Yes	290	58.0
No	190	38.0
No Response	20	4.0
Total	**500**	**100.0**

Source: Researcher Work, 2012.

Table 1 shows that majority of the respondents 290 (58.0%) said 'yes' they have ever heard about EC, 190 (38.0%) while only 20 (4.0%) did not respond to this question. This simply means that few above average of the female students in Ahmadu Bello University, Zaria have heard about the concept of EC. This is not too good and impressive percentage of those who have ever heard of EC especially in academic institution like Ahmadu Bello University, Zaria. It means there has been poor awareness or orientation about EC in the country at large even though it is not a doubt if some of those who said they have never heard of EC must have ignorantly use it at one time or the other whether orthodox or local type to arrest unwanted pregnancy after unprotected sexual intercourse with their male counterparts. It is also a bad health signal if the learned do not have good knowledge about some health issues the engage in then what do you expect from the illiterates parents, neighbors and friends. This in a way may contribute to inability for the country to attain the millennium development goals because by the time you annex 38.0% and 4.0% (that is those that said no and no response) it will give over 40.0% that have never heard about EC before this study.

Table 2: Emergency Contraceptive Use

Option	Frequency	Percentage (%)
Yes	110	22.0
No	380	76.0
No Response	10	2.0
Total	**500**	**100.0**

Source: Researcher Work, 2012.

Table 2 shows that most of the respondents 380 (76.0%) said 'no' they have never use EC products, 110 (22.0%) said 'yes' they have ever use EC products while 10 (2.0%) did not answer this question. This indicate that going by this study over 20.0% of post secondary schools do not use contraceptives to prevent unwanted pregnancies instead they depend strongly on the use of EC. These in most cases pose serious and dangerous health risk to the users (potential future mothers), it may be responsible for the high prevalence of HIV/AIDS in Nigeria, (NACA,). This is because of the problems or implications that characterized or associated with EC products whether orthodox or traditional type. Ordinarily, the pre-sex preventive measure (contraceptives) will have reduced the health risk. This study isn't saying EC is bad but in as much as they always use EC, it does not cost them anything to make provision for contraceptives to prevent unwanted pregnancies and sexual related diseases but most of the actors probably are those who do not like their male partners to use any form of contraceptives on them or the sexual intercourse was not planned for most especially the so called, '*born again*'. They will not wasn't anybody to know that they engage is such act since it is against the faith they strongly believe in, practice, hold tenaciously and preach. Therefore, secrecy is the order of the day in such situation, the use of contraceptives is out of it totally, they believe that anybody can see them even in the most unexpected place. On the other hand, it is impressive to note that majority of the female students allow the use of contraceptives by their male counterparts. Such are well protected from sex related diseases. Although, this depends on the type of contraceptives use. For instance, the use of withdrawal type does not protect the actor (s) from sex related diseases.

Table 3: Ever engage in unprotected sex and step explore to prevent unwanted pregnancy

Option	**Engage in unprotected sex**		**If any step was explore to prevent unwanted pregnancy**		**did you use any EC to prevent pregnancy**	
	No	**%**	**No**	**%**	**No**	**%**
Yes	130	26.0	44	33.8	35	80.0
No	300	60.0	59	45.4	09	20.0
No Response	70	14.0	27	20.8	-	-
Total	**500**	**100.0**	**130**	**100.0**	**44**	**100.0**

Source: Researcher Work, 2012.

Table 3 displayed 3 important issues. One, it disclosed whether or not the respondents engage in unprotected sex. Two, is any step was taking after the unprotected sex to prevent unwanted pregnancies and thirdly, if any EC products was used or not. From the Table, 300 (60.0%) of the respondents agreed 'no' they do not engage in unprotected sex while 130 (26.0%) said 'yes' they do engage in unprotected sex. This indicate that with 26.0% not using any form of contraceptive to protect and prevent unwanted pregnancies, the prevalent of HIV/AIDS in Nigeria will still be very high. Although they may have several reasons why they choose not to use it. Among the 130 (26.0%) that engage in unprotected sex, 44 (33.8%) take urgent step to weaken the strength of the sex so that it does not develop into unwanted pregnancy while 59 (45.4%) do not border to take any step. This indicates that the level of risk taking by most of these female ladies engaging in unprotected sex is very high. About 35 (80.0%) of those that actually take any step to prevent unwanted pregnancy use one form of EC or the other while only 9 (20.0%) did not use EC but probably exploit other means that is, crude means such as using hot drink, potash, lime orange and some other concoction to weaken the spermatozoa.

On the understanding of emergency contraceptives or meaning of emergency contraceptives, quite a number of definitions were provided but few that are meaningful will be documented in this study. Some define EC as protective materials used to prevent against infectious diseases and unwanted pregnancies after sexual intercourse. Also, some agreed that EC is a drug use to prevent the occurrence of pregnancy or any other measure taken to prevent conception.

To some, EC is the urgent use of method to prevent unwanted pregnancy. It is also a measure taking after having unprotected sex and to avoid pregnancy. Some in the contrary define EC as a measure/ protective taking before, during or after sexual intercourse with opposite sex partner to prevent unwanted pregnancy and sex related diseases (STDs, HIV/AIDS, and Gonorrhea) to mention but a few. It is pills that are used urgently after unprotected sex or the use of a means to prevent unprepared for pregnancies and prevention of sexual diseases. These definitions corroborate the interpretation given under Table 1. That is it further explains that most of the female students in tertiary institutions of learning do not have good understanding and knowledge of what EC is all about even though it is a medically preventive activities they engage in most of the time.

Table 4: Types of Contraceptives known and use by the Respondents

Type of Contraceptive	Knowledge about		Contraceptive ever used	
	No	%	No	%
Male Condom	500	100.0	150	30.0
Female Condom	500	100.0	205	41.0
Oral Pills	500	100.0	455	91.0
Injectables	205	41.0	15	3.0
IUD	86	17.2	08	1.6
Spermicides	55	11.0	-	-
Implants	150	30.0	11	2.2
Diaphragm	55	41.0	-	-
Periodic Abstinence	500	100.0	15	3.0
Withdrawal	500	100.0	472	94.4
Female Sterilization	350	70.0	-	-
Male Sterilization	310	62.0	-	-
Traditional and other methods	356	71.2	105	21.0

Source: Researcher Work, 2012.

Table 4 shows a respondents knowledge of contraceptives and variation in the use of contraceptives among female students in tertiary institutions of learning. From the above Table 4, all the participants 500 (100.0%) have common knowledge about male and female condom, oral pills, periodic abstinence and withdrawal. The usage of these contraceptives depends solely on the gender classification. For instance, the participants male counterparts must have use male condom on them during sexual intercourse. The above mentioned contraceptives are the most common ones that most people use and probably available almost in all patents medicine vendors (PMVs) in Nigeria. It is important to note that the participants do not have the level of knowledge about the remaining types of contraceptives such as IUD, male and female sterilization, diaphragm, implants to mention but a few. It is expected of all students in tertiary institutions and if possible those in secondary schools to have a good understanding of the types or methods of contraceptives even if they will not use at all in order to always play safe mostly in any emergency period. They could also be of help to friends and neighbors in the area educating or enlightenment on the proper and adequate use of contraceptives. Studies have shown that lack of good knowledge about contraceptives have sent so many people into early grave and barrenness even when there is a strong need of having more children, (COMPASS, 2006).

In respect to contraceptives use among female in tertiary institution of learning, injectables (3.0%), IUD (1.6%), implants (2.2%) and periodic abstinence (3.0%) experience poor usage. It is important to note that spermicide, diaphragm, male and female sterilization witness no usage at all among the undergraduate university students.

Table 5: Types of Emergency Contraceptives known and use by the Respondents

Type of Emergency Contraceptive	Emergency Contraceptive heard		Emergency Contraceptive ever used	
	No	%	No	%
ORTHODOX EMERGENCY CONTRACEPTIVES				
Oral pills (Prostinor 2)	110	100.0	110	100.0
spermicide Cream	75	68.2	61	55.5
TRADITIONAL EMERGENCY CONTRACEPTIVES				
Traditional waist belt	53	48.2	21	19.1
Traditional ring	61	55.5	46	41.8
Traditional herb	87	79.1	53	48.2
Traditional arm belt	55	50.0	18	16.4
OTHER TYPE OF EMERGENCY CONTRACEPTIVES				
Self inducement	95	86.4	45	40.9
Hot drinks (gin, ogoro)	110	100.0	102	92.7
Mixture of potash and lime orange	110	100.0	100	90.0
carbonated drinks (crest, bitter lemon, Schweppes)	110	100.0	110	100.0
Alabunkun and blue for clothes	110	100.0	110	100.0
Andrew liver salt	110	100.0	110	100.0

Source: Researcher Work, 2012.

Table 5 displayed types of EC the respondents heard/know and ever used. These EC are categorized into 3 parts. Taking a critical focus at each categories of the EC in the above Table, generally, it is important to note that the EC users could afford to take or try any form of EC if only to satisfy their immediate need rendering the sperm inactive as displayed in categories 2 and 3 especially category 2. That is, the traditional EC. Most people in Nigeria do not believe in them because of destructive criticism most people leveled against. But those who use these traditional EC affirmed to its effectiveness. Although none of it exists without a strong warning, if bridged, it will loose its efficiency unlike other categories, no warning is attached to its usage except instructions.

From the Table the level of usage differ even though the respondents may know or have heard about the EC products before. For instance, the traditional EC group, the participants know or have heard about them but the usage turnout to be very poor e.g the traditional waist and arm belt are 19.9% and 16.4% respectively. The third group may not all that strange to us but it is absolute. That is, participants engage in using them. Of course, someone who have ever used or know it very well must have introduced the EC to them.

> *A primary 5 pupil was impregnated by a boy in Zaria, nobody in the family know about it but fortunately and unfortunately, she was relocated to her parents' home town (southwest), she could not hide from her peer group and they got concoction of potash, blue and lime for her to drink. Unfortunately, she died.*

Problems of Emergency Contraceptives

It is no doubt that the use of EC of any type is risky. That is, none of the products that do not have its own embedded health implications on the users. It is important therefore to note that the side effects associated with the use of EC and its reaction or manifestation in the body system of the individual users differs. Here are some of the problems that characterized the use of EC. These problems can be categorise into two (2) major ways. The health and social problems of using EC. Medically, they are uncertainty/ unreliability of the type use, delay in conception; menstrual pains, delay bleeding and fluctuation, constant itching of the private part, may destroy the womb, abdominal pain, difficulty in delivery

Socially, it can lead to brake in marriage, it encourages promiscuity, it may also cause stigma, protrude stomach (even when they are not pregnant) and it may finally lead to untimely death.

The above facts corroborate with some of the effects of EC use, according to WHO, (2005), include nausea, abdominal pain, fatigue, headache, and menstrual changes. Breast tenderness, fluid retention, and dizziness may also occur. Many of these symptoms may be less severe with progestin-only or intrauterine forms of emergency contraception. Serious risks include heart attack, blood clots, and strokes. Emergency contraceptive pills do not continue to protect against pregnancy during the rest of the cycle. Emergency contraception may not prevent tubal pregnancy. If you experience severe abdominal pain, contact your health care provider immediately. Tubal

pregnancy can be life threatening. Side effects of IUDs used for emergency contraception are the same as those for ongoing birth control IUDs. Emergency contraception does not protect against sexually transmitted infections, nor does it treat existing infections.

Discussion of Findings:

Results show that utilization of EC was very low, in fact, it is out of place if concluded that majority of students (girls) in higher institutions of learning in Nigeria did not have knowledge about EC despite the fact that most people use them very well both orthodox and traditional type; correct use was even lower. The age of the respondents, marital status, and knowledge about EC and previous use of regular contraceptives as variables were found to be major predictors of EC utilization.

In this study it was found that 130 (26.0%) of those who had unprotected sex used EC, which is similar to the report of most studies in developing nations especially Nigeria (Dejene, Tsion and Tefera, 2010). The possible reasons for a low EC practice observed in this study might be related to the fact that some people still do not believe in the reality or existence of HIV/AIDS even among the learned people and students in Ahmadu Bello University, Zaria (34.6%); compared to (57%) at the university in South Africa. It might also be due to a lack of knowledge of EC observed in this study (58.0%). This outcome is not good in an academic environment like Ahmadu Bello University, Zaria in this 21st century. It is worthy of note that most students that have one time or the other engage in premarital sex must have been involve in one form or type of EC or the other but never known the process is called *emergency contraceptive*.

Girls who were older were found to have used EC more than their younger counterparts. This finding is consistent with the study conducted in South Africa, Nigeria and France, which reported that age has a significant effect on the practice of EC, where older age groups are more likely to use EC when compared to younger age groups. Younger girls may have less information about the proper use of EC due to the fact that they are newly enrolled in university and may not have received this information in prior schooling. Although, there are few cases of local EC wrongly use among secondary schools students in some part of Nigeria especially in areas where promiscuity is the order of the day. Such students embark on local EC as the final result through friends since they will not want parents, guardians and their neighbors to know about it because of fear of the unknown and stigmatization respectively.

In the current study, marital status of the findings showed a significant nexus between married female students the of practice EC than unmarried girls. The effect of marital status and increment in age on EC use might be linked to issues like decreased fear of being seen by others for those older and married girls. In addition, better exposure to information, maturity and heightened awareness of the consequences of unintended pregnancy held by girls as they get older and engaged in marital status that means older/married women would have less severe consequences from unintended pregnancy than would their younger unmarried counterparts.

In this study, good knowledge of EC was a significant predictor of their use, which is in agreement with reports of studies conducted earlier in Nigeria, Ethiopia, Cameroon and Sweden where knowledge of EC was significantly associated with increased likelihood of using them. The study also showed that experience of using regular contraception had a significant association with EC use, where those who used regular contraceptive methods used EC more compared to those who had no previous experience of regular contraceptive use. This finding is inconsistent with the reports of other studies which showed that a lower proportion of girls with experience of regular contraceptive use used EC. This inconsistency might be explained by the differences in level of use of regular contraceptives in the studies which were not further explored. More so, most of those who use these contraceptives do not want other married women like them to know because of social stigma especially among the illiterate married women.

Although the findings of this study may not be generalized to unmarried girls who are out of University, it has demonstrated the sexual and reproductive health problems faced by girls in Ahmadu Bello University, Zaria. However, the findings may not be representative of all higher learning institutions of Nigeria as the socio-cultural situations around the different Universities in Nigeria vary greatly. In general this study came up with findings which have a policy implication of reducing the short and long term effects of unintended pregnancy among students in tertiary institutions in Nigeria and some developing nations at large. The need for increasing the knowledge of university girls about EC and availing youth friendly sexual and reproductive health services is implicated because of the implications that characterized wrongly use of EC be it orthodox or local type. Some of these problems or implications such as loss of weight, death, destruction of diaphragm or womb, severe menstrual pain, constant itching in the private part, uncertainty of the method use and may lead to bareness and lots more.

Conclusion:

In general, this study came up with findings which have a policy implication of reducing the short and long term effects of unintended pregnancy among young girls (unmarried) and young married (may not have good and adequate gap for their children) in higher learning tertiary institutions. The need for increasing the knowledge of tertiary institution of learning girls about EC and availing youth friendly sexual and reproductive health services is implicated.

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Engaging Students In an Integrated Ecology, Technology, Engineering, and Mathematics Curriculum: A Florida Summer Program for Gifted Secondary Students

Brian Zoellner and Faiz Al-Rubaee
University of North Florida
b.p.zoellner@unf.edu; falrubae@unf.edu

Abstract: For over five years, faculty from the University of North Florida (UNF) and regional school districts have collaborated to create unique learning opportunities related to science, technology, engineering, and mathematics (STEM) topics for gifted and high-achieving secondary students. Within these summer learning experiences, through either residential or day camps, campers worked with science, technology, engineering, and mathematics faculty in university labs and settings. The design and implementation of these experiences involved post-secondary and secondary personnel and engineering, science, education, and mathematics faculty across several colleges. The purpose of this paper is to describe the critical components related to building partnerships between and within post-secondary and secondary school systems.

Introduction

This paper is a description of the critical components related to building partnerships between and within post-secondary and secondary school systems. An important part of this discussion is our design priorities of this program and how they connect to these partnerships. After having conducted this program for several years, we felt it important to step back and take stock through a multi-faceted examination of the camp: looking at it's priorities and goals, functions and operations, and lessons we learned. In our experiences, conducting the camp has been a matter of pragmatism and expediency. To this point, our activities have been focused on planning and implementing, but not reflecting. This examination will lead to more intentional curriculum design that to address our missions, goals, and objectives. This examination will lead to important implications for the future of the program.

To begin, we will discuss the rationale for conducting this program of this nature. Next, we will connect our program design to the national curriculum priorities outlined by important reform-oriented documents including *Science for All Americans*, the *National Science Education Standards,* the *Common Core State Standards,* and the *Next Generation Science Standards.* In making this connection, we will make clearer the rationale behind the goals for the program and our approach to the design of the curriculum. Next, we will share some of the key collaborative components that make meeting these design commitments possible at a university setting. These include addressing the issues of working across colleges and departments within the university, and with local and regional education agencies. Finally, we will discuss some of the lessons we have learned from our experiences and ideas for future program development. We believe this paper will be of interest to a higher education audience because it outlines necessary elements to insure successful collaborations, both within universities and those between universities and local schools, and key STEM education reform efforts.

Background

The camp team has evolved through time, but what has stayed consistent has been a relationship between post-secondary personnel at the university and those in the secondary schools in the surrounding counties. The most current iteration has been lead by one member of the Foundations and Secondary Education Department and one from the Mathematics Department. The education faculty member's area of specialty was secondary science education and was a high school science teacher for five years. The mathematics faculty member has been involved in secondary education through teachers' workshops, student enrichment programs, and mathematics curriculum work for 30 years.

The summer camp is a cooperative effort among three colleges and the public schools from the four surrounding counties. Most recently, we have worked with a consortium of school districts in the northeast Florida region. This consortium serves rural and suburban students.

Past and present staff members of the camp have included mathematicians, engineers, chemists, biologists, science/technology educators, gifted education specialists, and senior undergraduate and graduate students from multiple disciplines. They have met and planned with the gifted coordinators for the four counties and with faculty members from the School of Engineering, and the Departments of Mathematics, Chemistry, Biology, Leadership, Counseling and Instructional Technology, and Foundations and Secondary Education at UNF. These meetings and communications resulted in the construction of the major content components of this camp.

Another critical component of the summer camp staff has been undergrad and graduate students. In the recruitment of graduate and undergraduate students special attempts have been made to hire students with education majors or strong content backgrounds. The duties of these students have varied from serving as counselors, working through logistics and camper oversight, to running teaching sessions. These sessions have included modules on robotics and discussions about engineering clubs on campus.

Historically, the summer camp staff has judged students applications for the summer camp. A minimum of four of the following criteria have been used in the evaluation of applicants:

- Verification of meeting criteria for gifted student status
- Scores in science and/or mathematics on nationally norm referenced achievement tests
- Self-nomination essay
- Academic criteria of grade point average
- Letters of recommendation

Special consideration has been given to include students from *underrepresented groups* in the gifted programs in the surrounding counties. The selection effort also specifically targeted schools and teachers in underrepresented areas in these counties in order to recruit gifted and high achieving minority students. The campers we have worked with have been from rural, suburban, and urban schools.

The university campus has robust collaboration, together with expert instructors, state-of-the-art Mathematics, Chemistry, Biology, and Engineering labs. The design and coordination experience of the camp staff has provided these gifted/high achieving campers with a wide variety of challenging and fun activities in both classroom and lab settings. The unique exploration and learning experiences that have been provided by the camp would not otherwise available during the academic year in a regular or gifted classroom setting in the typical secondary classroom. Because of the highly specialized nature of the university labs and the intensive personalized attention given to each camper, the camp size has been limited to 30-40 students.

Rationale and Need

Gifted students have been traditionally underserved by the educational system. In their report, "Preparing the Next Generation of STEM Innovators," the National Science Board (NSB) of the National Science Foundation identified a pressing issue in STEM education today when it said that

> far too many of our most able students are neither discovered nor developed, particularly those who have not had adequate access to educational resources, have not been inspired to pursue STEM, or who have faced numerous other barriers to achievement. (NSB, 2010, pp. 5-6)

Even more at-risk are high-achieving students of lower socio-economic status. These students often slip academically from elementary to high school and are more likely to drop out of school than their higher income counterparts (Wyner, et al., 2007).

Gifted young students in the county school districts surrounding the university have a continuous need for a well-designed programs in science, technology, engineering and mathematics The higher education institutes in this region, including the university, have provided, independently and collaboratively, several camps for underachieving and average performing middle and high school students in the past. Many of these camps were designed without addressing the needs for gifted/high-achieving students of the region in the areas of science, technology, engineering, and mathematics. Because of the lack of such programs, a small number of these gifted

young future scientists have found summer refuge and perhaps a future home in out-of-state institutions. This project is innovative in that it immerses these gifted students in situations encountered by professionals in the field and it utilizes the college-level laboratories, challenging activities, and instruction.

Florida standardized test scores provide evidence for the need for programs to aid local students in integrating math and science. While the scores have been variable, there has been an identified focus on improving student learning opportunities in the STEM areas.

Program Goals and Design Commitments

Informed by the national STEM reform efforts in education, the major program goals are to provide students with the opportunity to (1) participate in scientific hands-on experiences in the STEM areas, (2) engage in activities that help them understand the nature of science, and (3) see connections between the STEM content areas. This comprehensive and integrated approach seeks to achieve the following objectives:

- Increase students' depth of content knowledge;
- Provide students with university-level scientific research experiences and skills;
- Foster an awareness of leadership characteristics;
- Enhance problem solving skills;
- Build career awareness in mathematics, science, and engineering;
- Increase mathematics and science academic achievement;
- Foster interpersonal skills;
- Increase awareness of the relevance of mathematics, science, and engineering to everyday problems; and
- Foster the understanding and use of technology in learning mathematics, science, and engineering.

To accomplish these goals, our design commitments include:

- A multi-disciplinary approach to math, science, and engineering content
- A focus on problem solving
- The examination socio-scientific issues
- Providing opportunities for under-served populations

There are multiple commitments that influenced the design of the summer camp. First, we were committed to a multi-disciplinary approach to curricular design. There are many national calls for subject matter integration within K-12 instructional contexts (American Association for the Advancement of Science, 1990; National Research Council, 1996; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010; NGSS Lead States, 2013).

Berlin and White (1994) clarified the meaning of curricular integration in their *Integrated Science and Mathematics Model*. In this model they identify six requirements that broadly define integration: ways of learning, ways of knowing, process and critical thinking skills, content knowledge, attitudes and perceptions, and teaching strategies. A key purpose of science education is to give students a means of understanding and acting on important issues by developing strong decision-making skills when they encounter real-world problems. Bring these skills and perspectives will give students a foundation to base decisions as citizens (National Research Council, 1996). The camp team members have built curricular connections to create a cohesive integration and meaningful links

between activities. A reflection period at the end of each day has helped students create mindful connections and extensions about the activities they experiences.
Second, as part of this curriculum design, we focused on moving beyond just factual information toward application of knowledge and skills toward problem solving. Students were provided challenging hands-on scientific and educational opportunities not available in their schools and originally designed for college level courses. As a result, students have had the opportunity to (1) develop problem solving skills, (2) stretch their thinking, (3) work in a team format and as individual with advanced scientific principles in realistic contexts, (4) make choices while solving open-ended problems, (5) develop independence as learners and (6) enhance leadership skills. The focus of many of the projects will be to integrate different aspects from science, technology, engineering and mathematics thus providing students with powerful cross-disciplinary perspectives.

Reform efforts have emphasized the use dialogical processes within science instruction; however, science is often understood to be a set of routinized practices that lead to single, correct answers that rarely lead to or are connected to real-world issues and concerns (Garii & Rule, 2009). Additionally, many teachers rely on the assigned textbook for curricular development and instruction, as the complexity and amount of knowledge embedded within science curricula can be overwhelming (Herbel-Eisenmann, 2007). While science offers myriad implications within real-world situations and problem and can foster introductions into the gray areas and uneasy possibilities, these are not typically found in typical secondary classrooms (Bishop, et al., 2006; Garii & Rule, 2009). Unfortunately, the literature also indicates that science teachers still follow more traditional approaches to their instruction (Aikenhead, 2006; Davis, 2003; Jenkins 1992), and we hope to counter these experiences by providing campers with real-world problem solving activities. Because we value the inclusion of socio-scientific issues the curriculum, and see its value to students, the summer camp is designed to allow students to see the usefulness of science and engineering to solve broader societal issues.

Finally, we were committed to an underserved school population — gifted and talented students. The university camp team members are experienced faculty that has worked with gifted students in the past. In addition, the gifted specialist has conducted in-service training for participating faculty on implementing *Florida's K-12 Framework for Gifted Learners* (Weber, et al, 2007).

To summarize, the summer summer camp is innovative in that it immerses students in situations encountered by professionals in the field and it utilizes the university's state-of-the-art laboratories. The focus of the camp activities has been to engage students in real-world problems by integrating different aspects from science, technology, and mathematics through inquiry-based projects and activities. These activities, designed to meet the ambitious and influential vision set by the American Association for the Advancement of Science (*Science for Americans*, 1990, and the *Benchmarks for Science Literacy*, 1993), National Council for Teachers of Mathematics (*Principles and Standards for School Mathematics*, 2000), and the National Research Council (*National Science Education Standards*, 1996), the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief
State School Officers, 2010), the Next Generation Science Standards (NGSS Lead States, 2013), and state-level documents like the Next Generation Sunshine State Standards (e.g. the Nature of Science and physical science standards). They have provided gifted secondary students with challenging, hands-on scientific and educational opportunities not always available in their schools, as they focus not only on college level scientific content, but also often-overlooked "science as process" components. These activities will provide students with powerful cross-disciplinary perspectives.

Curriculum and Teaching Strategies

The summer camp teaching strategies have been based on introducing campers to a variety of challenging, yet fun and interesting, projects that relate to their daily lives in the areas of mathematics, chemistry, biology and engineering. The modeling, discovery, and hands-on approaches were the cornerstones of all teaching strategies. In these approaches, campers conducted their own independent research as well as work together in their group projects. To enhance campers' communication skills, students presented their findings to class during and after each project as an individual or as representatives of their teams. The activities in this camp were designed to (1) promote inquiry, (2) enhance personal reflection and metacognition, and (3) increase student awareness of the role that collaboration plays in scientific activities. For example, campers were engaged in a continuous format of planning, developing and reflecting on their findings and discoveries. Also, campers reflected on their roles as future scientists and leaders in the area of mathematics, physics, and engineering during their writing, research, and reading experiences and discoveries.

Projects for the summer camp have been specifically selected to help campers make connections and see the interrelation of these disciplines and how they relate to their daily lives. Campers have also been instructed to maintain and provide a scholarly portfolio for their daily activities in the camp. Each portfolio included lab reports, findings, summary, and conclusions for every project as well as pre- and post-test assessments. The aims of the wide variety of teaching strategies and assessment types were to help students:

- Build the skills and knowledge in mathematics, science, and engineering and leadership that expand beyond the secondary curriculum;
- Enhance career awareness in mathematics, science, and engineering;
- Become an effective team player capable of working and researching independently or with minimal supervision;
- Become a successful communicator of ideas and knowledge;
- Expand their understanding of the role of a leader and the skills that leaders possess;
- Explore the relevance of their mathematics, science, and engineering experiences to their everyday lives;
- Understand and use technology in learning mathematics, science, and engineering effectively;
- Use the skills of mathematicians, science, and engineers in the field solving real world problems; and
- Enhance leadership characteristics, vocabulary, inquiry techniques, and understanding of the content.

As an example of the types of activities we used to accomplish these objectives, we will describe a recent summer camp in 2013. Water ecology (integrated biology and chemistry) was the theme, with the specific problem of assessing the health of bodies of water. The engineering modules were connected to general issue of watershed health (especially anthropogenic factors related to engineering) through personal and societal water use and waste generation. Both engineering and water ecology modules involved fieldwork and data collection. The overview of the daily schedule for a four-day, residential camp is listed below.

Group A	9:00-12:20	12:30-1:30	1:40-5:00	5:10-6:45	7:00-8:15	8:30-9:30
Monday	Water Ecology Module	Lunch	Engineering Module	Engineering Enrichment	Dinner	Movie
Tuesday	Water Ecology Module	Lunch	Engineering Module	Engineering Enrichment	Dinner	Pool
Wednesday	Water Ecology Module	Lunch	Engineering Module	Engineering Enrichment	Dinner	Movie
Thursday	Water Ecology Module	Lunch	Engineering Module	Departure		

On days one and two, campers were put into research teams and learned about methods of assessing the health of bodies of water. Teams visited lakes on campus to take water samples to analyze. In the engineering modules, they focused on water use and were assigned the task of keep track of their personal water consumption.

Campers focused on waste production and its effect on aquatic ecology, on days three and four. In the biology module, campers completed their data analysis and drew upon their engineering knowledge to create a plan meant to improve the health of campus water bodies. As part of this activity, campers worked in their research groups to create watershed remediation plans designed to improve the health of the water bodies (with data analysis to justify this plan). They presented these plans, for evaluation and peer critique during the last session of the camp. This activity was meant to give campers experience communicating their ideas in science and modifying conceptions based on new information and data shared during presentations.

During time outside the ecology and engineering modules, campers completed engineering, math, and science enrichment activities. These activities were hands-on and problem-based and centered on robotics using LEGOs. Other activities included visits to the labs used by college engineering clubs. These were of high-interest to the campers as reflected on evaluation surveys. Additionally, students used civil and environmental engineering content to develop remediation plans for the local watershed.

In summary, the approach made our objectives achievable because of the strength of the university built on:

- The university's successful history with outreach educational programs and summer camps which extends over 40 years of collaboration with local public schools;
- The extensive experience of the university team in conducting the research with and monitoring/coaching of gifted students in a team/camp format and as well as working with students individuals;
- The university's previously designed mechanisms to integrate students' and faculty members' daily reflections and feedback into our assessment procedures; and
- The university's modern and state-of-the-art laboratories and technologies that provide a hands-on scientific environment for these future scientists to go beyond the traditional gifted school setting and activities.

Key components the camp structure and resources have included a depth and the breadth of faculty members experience with, authentic interest in, and commitment to public school students who are underrepresented, economically disadvantaged, and gifted. Additionally, the physical facilities and equipment, in particular the labs and technologically enhanced classrooms, have provided a rich and accommodating environment to challenge and motivate students in their discoveries, particularly in the engineering, chemistry, biology, mathematics and simulation projects. Finally, the outstanding commitment and willingness of the university faculty and staff, particularly the engineering faculty to provide in kind donation of their time and services in order to alleviate costs associated with the camp has been important in meeting the goals of the camp.

Curriculum and Teaching Design Lessons Learned

Through the time we have conducted the summer camp, some key design elements have emerged to help our program be (and remain) successful. The first has been gathering input from campers and staff. This goes beyond just the typical after-event evaluations. We used input as formative assessment to make adjustments during the camp session. The second element relates to resources and our commitment to keep costs to campers low. We have been fortunate to find outside funding and have camp staff willing to provide their expertise and facilities at discounted rates. The third element was a developing a sense of team among the camp staff. There was a shared mission and responsibility to camp operations and curriculum. The final component was the intrinsic appeal of campus life. Allowing campers to experience living in a dorm, eating in the dining hall, and working with undergrads and university faculty in impressive facilities had a lot of appeal to the campers.

The first important design element has centered-on gathering input from participants and team members. We asked for daily student input using multiple communication modes and instruments. A key instrument in this data gathering has been the Plus-Minus-Interesting (PMI) chart. The chart allowed students to share things they liked about the camp, things they didn't, and what they found interesting. We've been able to use this chart as a formative assessment tool to make adjustments to camp activities and operations. We also met with the teachers daily to gather information. Faculty met daily to discuss curriculum implementation and adjustments during the camp.

As an example of input gathering and adjustments made after the camp, faculty met with key district personnel to share evaluation findings. As part of this reflection and discussion, the team identified a student desire for an applied biomedical component. As a result of this discussion, this component was added to the newest iteration of the camp. Campers had the option of completing applied biomedical modules that included DNA analysis and large mammal dissection. Similar to the water ecology modules, at the end of the camp session, research teams presented their findings to their peers for discussion and critique.

Another key aspect relates to resources. With our commitment to working with under-served populations, keeping student costs down has been a priority. We have consistently sought internal and external grants to cover expenses.

We have also worked with departments and faculty team members who are willing to donate rooms and equipment at little or no cost. Faculty team members have also under-valued their contributions to the program to keep budgets low.

A third critical part of the program is a notion of teamwork. As faculty developed the curriculum, there is a sense of shared responsibility. Planning and development of content coverage and activities has been a common endeavor. As all team members brought different expertise, they have had input in materials.

One surprising finding was the appeal of campus life to students. We often take our work setting for granted and since the excitement of being an undergrad is a distant memory, teachers and faculty may overlook this appeal. Living a university life, for example using the recreation facilities, having access to cutting edge facilities and faculty, and meeting science, engineering and mathematics undergrads were popular aspects of our residential camp. We believe these experiences opened students eyes to what college was like.

Conclusion: Steps in the Future

There are several ideas the team has focused on to further develop the approach to future camps. These include

- Continuing the seeking government funding to maintain access for student of low socio-economic status,
- To better understand the effectiveness of the camp, conducting more systematic data collection to better assess student understanding of both content and process understanding of science and mathematics,
- Further developing a focus on "soft skills," like collaboration, within the curriculum,
- Providing greater time for students to work together in college-level, non-academic activities to help with their socialization.

While we feel it is a strength that we have been able to keep costs low (the last several camps were at no cost to campers), we believe that it is important to charge a nominal fee. We feel that may have the effect of giving greater buy-in and commitment on the students' and guardians' part as they might have more "skin in the game" if they have to contribute some financial resources to the program.

As a second step, we believe we need to conduct more systematic data collection. Most states focus on standards and standardized assessment, we need to collect longer-term data about how our program affects student performance. Working with school districts, we plan to gather student achievement data, course selection, and college attendance as indicators of our impact.

As another component students need more instruction and practice working in teams. This is a more accurate representation of how scientists often work. While we had students in teams, we did little to build team skills (the "soft skills" employers often look for in high school graduates). As part of these skills, students have a difficult time actively judging work from others. Proposed activities might include instruction on how to discuss data, critique data models and explanations, and create effective presentations to share with other working groups.

Our final modification relates to the overall student experience in our camps. We often forgot that we were working with high school students (though they met and exceeded our expectations for work ethic and quality). While academics are important, students wanted more time to step away from their work and explore the campus. In the future, we hope to provide students more experience with these aspects. In the future, we plan to add more time devoted to campus tours and using recreation facilities.

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Errors Correction in Foreign Language Teaching

Naimi AMARA
Department of English, Hassiba Benbouali University, Chlef
Email: naimsoul@yahoo.com

Abstract: Error correction and its importance in the foreign language classroom have received considerable attention during the past decades. According to Corder (1967), correcting learners' errors is substantial in three different ways: First, they tell the teacher about the progress of the learner, and therefore what remains to be learnt. Second, they supply evidence of how a language is acquired and what strategies the learner employs in learning a language. Thirdly, they are indisputable to the learning process because making errors is regarded as a device the learner uses in order to learn. The present paper aims at highlighting fundamental background studies done in the field of Error Analysis. It also tries to help EFL teachers and educators to become familiar with the most frequent errors committed by EFL learners and lead language practicioners to consider some very imporatant issues about understanding the significance of Error Correction in the process of second language acquisition such as: how much correction should be made, at what phases the teacher should correct the error and how the teacher can correct the learner without de-motivating him/her.

Key words: contrastive analysis (CA), error analysis (EA), interlingual errors, intralingual errors.

I. Introduction:

Error correction is seen as a form of feedback given to learners on their language use. No teacher can deny the fact that correcting the errors made by students when they speak or write is one of the most difficult tasks in language acquisition.Thus, every language practicioner or teachr should consider some the following issues about error correction: the difference between a mistake and an error, how much correction should be made, at what phases the teacher should correct the error and how the teacher can correct the learner without de-motivating him/her. One crucial point in the field of Error Correction is to know the nature of learning a foreign or second language, i.e, how do we learn a second language? We have to investigate what happens in the mind of human beings through mental process to learn a language. In this respect, two phenomena have been distinguished by the American linguist Krashen (1987) when he clearly distinguished between: first language acquisition and second language learning. Different schools appeared in linguistics and psycholinguistics whose aim was to analyse learners' errors and to decipher their sources.Among those schools, we find the structural behaviouristic school and the transformational generative grammarians. Contrastive analysis (CA) and error analysis (EA) have been regarded as the two main pillars in the domain of second and foreign language learning. Generally, as Keshavarz (1999, p. 11) stated, "*…there have been two major approaches to the study of learners' errors, namely Contrastive Analysis and Error Analysis*." He further discussed that*, "Error Analysis emerged on account of the shortcomings of Contrastive Analysis which was the favored way of describing learners' language in the 1950s and 1960s*" (p. 42). The process involved in CA is the comparison of learners' mother tongue and the target language. Based on the similarities or differences between two languages, predictions were made on errors that learners would be likely or disposed to make as a result (Kim, 2001). Unlike CA which tries to describe differences and similarities of L1 and L2, James (1998 cited in Kim, 2001) stated that, EA attempts to describe learners' interlanguage (i.e. learners' version of the target language) independently and objectively. He believed that the most distinct feature of EA is that the mother tongue is not supposed to be mentioned for comparison. The purpose of Error Analysis is, in fact, to find " *what the learner knows and does not know*" and to " *ultimately enable the teacher to supply him not just with the information that his hypothesis is wrong, but also, importantly, with the right sort of information or data for him to form a more adequate concept of a rule in the target language*" (Corder, 1974, p. 170). The primary concern of this study is to explore the kinds of errors made by a group of Algerian EFL learners at university level in their written and oral expressions. More specifically, the study seeks to answer the following question: What are the most common errors that Algerian students commit in their written and oral expressions?

2. Lietrature Review:

2.1. First Language Acquisition versus Second Language Learning:

Applied linguistics is the attempt to put the insights resulting from lingusic reseach to practical uses. These include first and second language teaching (Such as: lexicography, translation….etc). Our focus of linguistic application is the field of language teaching which focuses in turn on the learner and the language learning process. How is this language which is the object of study of the linguist being learnt? We have to investigate what happens in the mind of human beings through mental processes to learn a language. In this respect, two phenomena have been distinguished Krashen (1987) when he talked about: first language acquisition and second language learning ***First language acquisition***: The term acquistion is ued to reffer to subconscious learning which is not influenced by explicit instruction about the L2 system or about errors against the L2 rule system. It takes place in a natural environment. Language data is not arranged as in a language teaching situation. The infant is exposd to an

unlimited data. The child is acquiring many things at the same time. Hence, first language acquisition is a mental psychological process which is natural, spontaneous and unconcious.

Second language learning: The term learning on the other hand is a conscious process which results from an explicit instruction about errors against the L2 rule system. A second language is learnt later on in life. The individual already functions with a language system. S/he already possesses a verbal behaviour. Learning in this case is conscious. The data is arranged by syllabus designers. The learner is not exposed to unlimited data like the infant. It takes place under formal instruction. Th learner is not necessarily young.

In other words, for first langauge acquisiton the child has biological capacities which enable him/her to acquire language. This was called by Noam Chomsky LAD. i.e. *Language Acquisition Device.* The latter is a predisposition of language acquisition of the environment in which children are born (Arabic in an Arabic environment.English in an English environment…etc). To sum up, infants are innately endowed with the ability to acquire a natural language and all they need to set the process of language acquisition going are natural language data. First language acquisition is easy and second language learning is difficult.

2.2. The Definition of Errors:

Before the 1960's, during the dominance of the behaviouristic view upon language there existed a dominated view of language to consider learners' errors as something undesirable. Making errors was seen as a sign of mislearning and regarded as undesirable to proper processes of language learning. According to the behaviouristic point of view, the reason behind making errors lies in inadequate teaching methods which if had been "perfect" they would never be committed. This way of thinking was considered to be naive a**s** there is nothing to be called "perfect" methodology especially with the appearance of the Universal Grammar concept proposed by Chomsky in 1965. The latter claimed that each human being has an innate capacity that can guide him through a vast number of sentence generation possibilities. Since then, a shift by language teachers towards the cognitive approach has started. Chomsky's theory contributes in raising researcher's interests about learners' errors as a source of hypotheses formation.

The importance of errors in language learning was first advocated by Corder (1967). He proved that strategies of L2 learners could be inferred through the analysis of their errors and that could be helpful for researchers of L2 learning process. Selinker (1992) highlighted two fundamental contributions of Corder's study in L2 learning. The first one is that the learner's errors are systematic and the second is that they are not "negative" or "interfering" but a positive factor, indicative of testing hypothesis.

There are a lot of definitions developed for the concept of "error". According to Lennon (cited in Brown, 2000**)**, an error is "*a linguistic form or combination of forms which, in the same context and under the same context and under similar conditions of production, would, in all likelihood, not be produced by the speakers' native speaker counterparts*." Corder (1967), on the other hand, differentiates between the mistake which is a performance error due to a random guess or slip and the error that refers to idiosyncrasies in the interlanguage of the learner manifesting the learner's system of operation while learning. The later can be seen as L2 a deviation from the adult's grammar of a native speaker which reflects the interlanguage of the learner.

Errors are systematic and may give valuable insight into language acquisition because they are goofs in the learner's underlying competence. When native speakers make mistakes, they can identify and correct them immediately because they have almost full knowledge of the linguistic structure of their mother tongue (Scovel 2001). Non-native speakers, L2 learners not only make mistakes, they also commit errors and as they have only an incomplete knowledge of the target language, they are not always able to correct the errors that they make. Thus the learners' errors reflect a lack of underlying competence in the language that they are learning.

2.3. Types of Errors and Theirs Sources:

Errors are indesponsible to the learning process but why learners make errors and why they find it so difficult to correct their errors. Researchers dealing with second language acquisition (Corder, 1974, Scovel, 2001) agree that one of the major causes of errors is language transfer. Yet, we can mention other related errors' sources as follow:

1. *Language transfer or interlingual interference*. In this type, errors are caused by mother tongue interference.

Eg1. I followed him yesterday slowly in the street. (Arabic thinking: negative transfer from Arabic to English)

E.g2: I received confidential ***informations*** from the police. (Negative transfer from French to English)

5. *Intralingual interference*: this kind of errors occurs during the learning process of the second language at a stage when the learners have not really acquired the knowledge. In addition, errors are also caused by the difficulty or the problem of language itself. According to Richards (1971), intralingual errors are also subdivided to the following categories:

a) *Over-generalisation*:

E.g: He can swims. Instead of saying : He can swim or He swims.

b) *Simplification*: (Redundancy/ reduction)

E.g. I studied English for two *year*. (Instead of *years*)

c) *Communication base*:
E.g: Using "airball" instead of balloon (coinage)
d) *Induced errors*: Due to the teacher's presentation of the material:
E.g: as if= like. The learner will wite the following sentence:
E.g: She cries *as if* the baby cries instead of writing: She cries *like* a baby.
d) *Analogial errors*: (started, goed)
E.g: He *goed* to school on foot.(Instead of saying went)
e) Ignorance of rule restrictions: the learner applies rules to context where they are not applicable (e.g. He made me to go rest" through extension of the pattern "He asked/wanted me to go").
f) Incomplete application of rules: the learner fails to use a fully developed structure (e.g. "You like to sing?" in place of "Do you like to sing?")
g) False hypothesis: the learners do not fully understand a distinction in the target language (e.g. the use of "was" as a marker of past tense in "One day I was travelled.").

2.4. Error Analysis:

Errors are seen as a systematic deviation made by learners who have not yet mastered the rules of L2. A learner can not self-correct his/her errors because they are a reflective product of his/her current satge of L2 development. Whereas, mistakes are defined as a random confirmation slip caused by tiredness, excitement or other sources, and the learner can readily self-correct his/her mistakes. Error Analysis is one of the most influential theories of second language acquisition. It is concerned with the analysis of the errors committed by L2 learners by comparing the learners' acquired norms with the target language norms and explaining the identified errors. For Crystal (1999, p. 108) Error Analysis in language teaching and learning is the study of the unacceptable forms produced by someone learning a language, especially a foreign language. According to James (1998), EA refers to "*the study of linguistic ignorance, the investigation of what people do not know and how they attempt to cope with their ignorance*".

Another definition of error analysis is given by Brown (2000). He defined error analysis as "*the process to observe, analyze, and classify the deviations of the rules of the second languages and then to reveal the systems operated by learner*". As stated by AbiSamara (2003), Error Analysis can be viewed as " *a type of linguistic analysis that focuses on errors committed by learners*". Corder (1967) views errors as valuable information for three beneficiaries: for teachers, it clues them on the progress of the students; for researchers, it provides evidence as to how language is acquired or learned; for learners themselves, it gives them resources in order to learn.

Brown (2000, p. 224) states that there are two main sources of errors, namely, interlingual errors and intralingual errors. Interlingual (Interference) Errors are those errors that are traceable to first language interference. These errors are attributable to negative interlingual transfer. The term "interlingua" was first introduced by Selinker (1972). He used this term to refer to the systematic knowledge of an L2 which is independent of both the learner's L1 and the target language (AbiSamra, 2003, p. 5). According to Kavaliauskiene (2009, p. 4), transfer of errors may occur because the learners lack the necessary information in the second language or the attentional capacity to activate the appropriate second language routine.

Transfer is of two kinds: positive and negative. The transfer may prove to be justified because the structure of the two languages is similar – this case is called 'positive transfer' or 'facilitation', or it may prove unjustified because the structure of the two languages are different – that case is called 'negative transfer' or 'interference' (Wilkins, 1972, p. 199).

As far as the intralingual errors are concerned, they result from faulty or partial learning of the target language rather than language transfer (Keshavarz, 2003, p. 62). Richards (1972) cites four main types of intralingual errors, namely: (1) overgeneralization, (2) ignorance of rule restrictions, (3) incomplete application of rules, and (4) false concepts hypothesized. Later he identifies six sources of errors: (1) interference, (2) overgeneralization, (3) performance errors, (4) markers of transitional competence, (5) strategies of communication and assimilation, and (6) teacher-induced errors.

Stenson (1974) states three main reasons for errors, namely, (1) incomplete acquisition of the target grammar, (2) exigencies of the learning/teaching situation, and (3) errors due to normal problems of language performance.

Committing errors is one of the most unavoidable things in the world. Students, in the process of learning language**,** profit from the errors that they make by obtaining feedback to make new attempts that successively approximate their desired objectives.Vahdatinejad (2008) maintains that error analyses can be used to determine what a learner still needs to be taught. It provides the necessary information about what is lacking in the learner's competence. He also makes a distinction between errors and lapses (simple mistakes). According to him, lapses are produced even by native speakers, and can be corrected by themselves. They call for on the spot correction rather than remediation, which is needed for errors. Mitchell and Myles (as cited in Keshavarz, 2003) claims that errors**,** if studied**,** could reveal a developing system of the student's L2 language and this system is dynamic and open to changes and resetting of parameters.

In the past few years, there has been a large and growing amount of literature on error analysis. In a recent study conducted by Sarfraz (2011) to examine the errors made by 50 undergraduate Pakistani students in written essays, he found that the overwhelming majority of errors the students made resulted from learners' interlanguage process and some errors resulted from mother tongue interference. Darus and Subramaniam (2009), using Corder's (1967) model on error analysis, examined errors in a corpus of 72 essays written by 72 Malay students. They found that students' errors were of six types, viz., in singular/plural form, verb tense, word choice, preposition, subject-verb agreement and word order. In addition, Ridha (2012) examined English writing samples of 80 EFL college students and then categorized the errors according to the following taxonomy: grammatical, lexical/ semantic, mechanics, and word order types of errors. The results showed that most of the students' errors can be due to L1 transfer. Furthermore, she found that most of the learners rely on their mother tongue in expressing their ideas. She added that although the rating processes showed that the participants' essays included different types of errors, the grammatical errors and the mechanical errors were the most serious and frequent ones.

As Shaffer (2008) mentioned, one of the questions facing every ESL/EFL teacher is how to correct oral errors and how much to correct. Researcher opinions vary widely on this: from no correction to extensive correction, from immediate to delayed correction, and from implicit to explicit correction. Language learners also have their own opinions on how and whether they wish to have their oral errors corrected by their teacher in the classroom setting. These opinions may be at odds with those of the experts, leaving the classroom instructor with more questions about error correction than answers. In his article, Moss (2000) supported this position and claimed that, when deciding how to respond to students' oral errors there are a number of questions we need to ask ourselves. First of all, '*Should learners' errors be corrected?*' In this regard, there are wide differences of opinion, but perhaps one of the most forceful reasons for carrying out correction is that many learners expect their errors to be corrected and can feel disappointed or resentful if they are ignored. The second reason is that, there is the danger that by leaving errors untreated, the defective language might serve as an input model and be acquired by other students in the class. Thirdly, the provision of corrective feedback can speed up the process of language learning by providing information about rules and the limits of language use, which would otherwise take students a long time to deduce on their own.

2.5. Teachers' Attitude to Errors:

Teachers are often afraid of their students' making errors. They feel that students might learn their mistakes and so they must make sure that everything they say is correct. This attitude goes back to the earlier belief, influenced by the behaviourist model of learning, which maintains that the language can be learnt by repeating correct forms until they become automatic, that is why repeating incorrect forms is harmful. It is now widely agreed that language is not learnt this way: it is a system of rules that the learner has to acquire, that trying out language and making errors are natural and unavoidable parts of this process. Doff (1993) explains that learners are applying rules from their own first languages and they are applying rules which they have internalised but they are in some way intermediate between their native languages (L1) and the target language (L2).

2.6. Error treatment:

Error treatment is a very complicated and weighty problem. Language teachers need to be armed with some theoretical foundations and be aware of what they are doing in the classroom. Henrickson (1978) lists the "five fundamental questions" and reviews the literature that addresses them:

1. Should errors be corrected?
2. If so, when should errors be corrected?
3. Which learner errors should be corrected?
4. How should learner errors be corrected?
5. Who should correct learner errors?

Second language acquisition theory has "answers" to four of these questions, answers that are, themselves hypotheses. Hendrickson (1978) predicts that if error correction is done according to the principles described below, it will be effective.

1. Should errors be corrected?

According to the second language acquisition theory presented here, when error correction "works", it does so by helping the learner change his or her conscious mental representation of a rule. In other words, it affects learned competence by informing the learner that his or her current version of a conscious rule is wrong. Thus, second language acquisition theory implies that when the goal is learning, errors should indeed be corrected (but not at all times; see below; and not all rules, even if the goal is learning). The theory maintains however, that error correction is not of use for acquisition. Acquisition occurs, according to the input hypothesis, when acquirers understand input for its meaning, not when they produce output and focus on form.

2. When should errors be corrected?

Concerning this problem, the most controversial issue is to treat them immediately or to delay. First, we are confronted with a dilemma—fluency versus accuracy. For communicative purpose, delayed correction is usually

preferred. Some advanced students believe that when to correct errors is determined by the type of errors committed. For instance, if they are pronunciation or grammatical errors, immediate correction is preferable, for post-correction cannot make learners remember anything. Furthermore, the overall situation in the classroom is also important. When the whole class is familiar with a word, but only one of them is singled out for being corrected, he or she would feel awkward. So, we can see that when to correct is very complicated. Both the teachers' intuition and the feedback from the students are equally important.

3. Which errors should be corrected?

Learners' errors are usually classified in different categories. Burt (1975) made a distinction between "global" and "local" errors. Global errors hinder communication and they prevent the learner from comprehending some aspects of the message. Local errors only affect a single element of a sentence, but do not prevent a message from being heard. According to Hendrickson (1980), global errors need not be corrected and they are generally held true. But the expressions such as "a news", or "an advice" are systematic errors, and they need to be corrected. As for pre-systematic errors, teachers can simply provide the correct one. For systematic errors, since learners have already had the linguistic competence, they can explain this kind of errors and correct them themselves. So teachers just remind them when they commit such errors. As to what kind of errors should be corrected, it needs teachers' intuition and understanding of errors. At the same time, the teacher should consider the purpose of the analysis and analyze them in a systematic way.

4. How should errors be corrected?

According to James (1998), it is sensible to follow the three principles in error correction. Firstly, the techniques involved in error correction would be able to enhance the students' accuracy in expression. Secondly, the students' affective factors should be taken into consideration and the correction should not be face-threatening to the students.

Some scholars believed that teachers' indirect correction is highly appreciated. They either encourage students to do self-correction in heuristic method or present the correct form, so students couldn't feel embarrassed. Compare the two situations:

Student: "What means this word?" (1)

Teacher: "No, listen, what does this word mean?"

(2) Student: "What means this word?"

Teacher: "What does it mean? Well, it is difficult to explain, but it means…

It is obvious that teacher's remodeling in (2) is more natural and sensible than the direct interruption in (1).

Up till now, both the theory and the application have been illustrated, in the next section we are going to deal with both the significance and limitations of error analysis in language teaching and learning.

2.7. Ways of Correction:

There are several ways of correction that can be employed in the classroom.

Self-correction:

After the student recognizes what is incorrect in his/her response, s/he should be able to correct him/herself. Self-correction is the best technique, because the student will remember it better.

Peer correction:

If the student cannot correct him/herself the teacher can encourage other students to supply correction. This technique is to be applied tactfully, so that the student who originally made the mistake will not feel humiliated. In the case of errors, it is useful if after peer correction the teacher goes back to the student who made the error and gets him/her to say it correctly. Edge (1990) mentions the following advantages of peer correction:

- It encourages cooperation, students get used to the idea that they can learn from each other
- Both learners (who made the error and who corrects) are involved in listening to and thinking about the language
- The teacher gets a lot of important information about the learners' ability - if students learn to practice peer correction without hurting each other's feelings, they will do the same in pair-work activities. However, it may happen that whenever the teacher asks for peer correction from the whole class, it is always the same students who answer. In this case the teacher has to make sure that other students are involved as well.

Teacher correction:

If no one can correct, the teacher must realise that the point has not yet been learnt properly. In that case the teacher can re-explain the problematic item of language, especially if the teacher sees that the majority of the class has the same problem. There might be more repetition and practice necessary. We must not forget that the main aim of correction is to facilitate the students to learn the new language item correctly. That is why it is important that after correction the teacher has to ask the student who originally made the error or mistake to give the correct response.

3. Methodology

3.1. Introduction

This section presents the research methodology used in this study and gives information about the population and the sample. It also describes the data collection instruments and procedures. It finally describes the validity and reliability of the instruments and gives information about the data analysis.

3.2. The Study Population and Sample:

Burns and Grove (1993, p, 779) states that a population is defined as all elements (individuals, objects and events) that meet the sample criteria for inclusion in a study. The study population consisted of 36 first year LMD students studying English as a Forugn language in Hassiba Ben-Bouali University. Mouton (1996, p. 132) defines a sample as elements selected with the intention of finding out something about the total population from which they are taken. The sample included in this study consists of 35 undergraduate students during the first semester of the academic year 2013/2014. To select the participants of the present study, a simple random sampling method was used in both experiments because it is regarded as one of the most reliable methods to obtain a representative sample. The participants, selected for the purpose of this study, are between 18 and 20 years of age. All of them were native speakers of Arabic, who also had a working knowledge of modern standard Arabic. They live in an exclusively Arabic-speaking community. Like most Algerian students, the ones who participated in this study had experienced approximately the same number of 7 years of education through the middle and the secondary education system. All the participants are homogeneous in terms of their linguistic, educational, and socioeconomic background. They speak Arabic dialect at home. All the participants did not receive any English language instruction in English speaking countries nor they had been to any English speaking countries to have any kind of English exposure.

3.3. Data Collection:

3.3.1. Data Collection Instruments:

Two major sources of data were used to find answers to the research questions:

1. First research tool: The written essays of 35 participants of the chosen university. The topics given in the essays were general but argumentative in nature.
2. Second research tool: The short talk of one student among the 35 students who participated in the written test.

3.3.2. Data Collection Procedure:

The first research instrument: All the 35 participants were required to write on one of the five following different topics: *politics*, *university life, sports, my favourite job or family problems.* They were asked to write approximately 150 to 300 words within a period of one hour. The participants were informed that they had to start with an outline, then a first draft and a final draft. The students did not know that their writings are going to be under investigation.

The second research experiment: One student was randomly shosen from the entire population to produce a short talk. Its purpose was to obtain oral data. The subject was asked to talk for five minutes about himself, his daily routine and about life in Algeria or in the local area where he lived. Ten minutes before the talk he was given some guidelines to help him organize his oral presentation and to avoid silent periods.

It consisted of the following points:

a) Place where he lived.
b) Knowledge of languages.
c) Things he liked.
d) Habits he had.
e) What Algerian people do on holidays.
f) What Algerian people like.

For the data analysis, the talk was divided into examples which in most cases correspond to the different sentences he produced.

3.4. Reliability and Validity:

3.4.1. Reliability:

Polit and Hungler (1993, p. 445) refer to reliability as the degree of consistency with which an instrument measures the attribute it is designed to evaluate. The researcher used a test-retest device to measure the reliability of the instrument. A pilot study was conducted through selecting 30 students from the target population randomly. These students did not take part in the actual study. The students were asked to write on one of the essays. Accordingly, the students' results showed consistency in the answers.

3.4.2. Validity:

The validity of an instrument is the degree to which an instrument measures what it is intended to measure (Polit & Hungler 1993, p. 448). To ensure the face and content of the study instrument, the method of trustee's validity was employed. A panel of judges consisting of two academic college instructors were asked to evaluate the given topics (for witing and speaking). They approved that topics were taken from materials appropriate to students' standard and suit their ages, and that the rubric set was very clear.

3.5. Data Analysis:

The analysis of written essays will be derived from Corder's (1967) method on error analysis. This method has three steps: (1) collection of sample errors, (2) identification of errors and (3) description of errors.

For the short talk, the type of data analysis applied was interlanguage analysis because for the purpose of the study, his IL had to be analysed not only as an independent system but also related to his native language and the target language the learner was aiming at; this way, in the examples produced four aspects were considered: the IL form, the literal translation of the IL form, the hypothesized target language form and the hypothesized native language form. The language topic selected to analyse the nature of transfer was adverbial placement since it has been a long debated issue in English, whereas few studies deal with Spanish-English interlanguage word order in this issue.

3.6. Conclusion

The researcher used a simple random sampling method to select the participants of the present study which consist of 36 male and female undergraduates at Chlef University. In the first experiment, 35participants were asked to write a well-developed essay from 150 to 200 words within one hour during one of their English classes. In the second experiment, one student was asked to talk for 5 minutes about a given topic. This section described the research methodology used in this study, including the population, sample, data collection instruments as well as strategies used to ensure the reliability and validity of the study.

4. Results and discussion:

4.1. First experiment result:

In the second experiment the subject produced the following talk:

Well I live in Chlef. . Chlef is in the centre of my country, Algeria. I speak a... two languages very well and also I speak a little French. And I like very much the football and also other sports. And often go to the stadium because I like very much the sports' world and also the internet very much. Everday when I have breakfast I... drink milk with cofee and some bread or cakes .And the Algereians, the people of Algerians go on holiday normally to the beach in summeror and also to the countryside... Also the people Algerian, especially old people, go in winter to natural baths like; Bouhnifia, Chiger….etc . At the Feasts where the people are in their homes with their family they enjoy eating delicious and traditional meals such as: coscous, mesfouf…..etc. Algerians like to visit each other in feasts and exchange some food and cakes, they help poor people with clothes, money and food like meat in Aid El-Adha. Most Algerians on weekends prefer to stay at home with family because they don't have nice public places or gardans to go. And finally I like very much the sport, and I like the Internet especially the facebook because I can chat with people from other foreign countries.

It can be noticed that the subject tends to follow the native-like placement relying on his own perception of similarity between both languages, resorting to the process and applying the strategy of similarity to the Ll, such as:

1. *and also I speak little French.*

The same applies to the following example where the occurrence of an intensifier adjunct between the verb and the object shows that the learner perceives that the Mother Tangue choice between Subject-Object-Adjunct (SOA) and Subject-Adjunct-Object (SOA) is the same as the Target Language one, creating an interlingual identification which leads him to apply the process of transfer:

2. *I like very much the football and also other sports.*

The use of interlingual identifications can also be observed in this example:

3. *And often go to the stadium*

In this example the subject also produces an empty category, omiting the subject which seems to be performance-related because in the rest of the sentences he does not produce this empty category; moreover, the subject's perception of the similarity between both languages, ie., his psychotypology leads him to the production of parallel structures in both languages. The common reference he uses is also present in:

4. *..the people of Algerians go on holiday normally to the beach in summer…*

This structure is the result of applying the abstract organizing principle that adverbials can take the same position as in the Mother Tangue; furthermore, the overuse of the adjective in a context where it does not apply also shows that he is following the IL principles.

5. *Most Algerians on weekends prefer to stay at home…*

Another example of a wrong placement of time- adjunct shows that the learner recognises that the MT choice between SOA and SAO is the same as the TL one, creating an interlingual identification which leads him to apply the process of transfer.

6. And I like very much the football.

The use of "the" with most words is another evidence of the language transfer from Arabic (MT) to English (TL).

7. *And finally I like very much the sport, and I like the Internet.*

The overuse of "and" in the whole passage or the short talk is clear due to the language transfer. Most Arab speakers frequently use "and" in their speech in initial and mid-positions.

The similarity the learner establishes between both languages is clearly noticed if we observe the talk he produced .As can be seen, the combination SAO and SOA is used in the MT as it is in the IL. More time adjuncts are produced in initial placement, the same tendency that can be observed in the IL; as for place adjuncts they tend to occur in final position. It is quite obvious that the subject creates interlingual identifications which enable him to apply the process of transfer resorting to the strategy of creating parallel structures.

4.2. Second experiment result:

In this section, the researcher presents and discusses the findings of the study in light of its objectives. First, the errors made by the students are classified; second, the common errors are identified with illustrative examples; and finally, these errors made by the leaners are corrected by examples. Table 1 shows the types, numbers and percentages of errors committed by the participants in their written work.

Type of error	Frequency of errors	Perecentages (%)
1.Verb tense	83	11.6%
2.Word order	57	8%
3.Subject/verb agreement	78	10.9%
4.pronoun	52	7.3%
5.spelling	88	12.3%
6.capitalization	44	6.1%
7.preposition	60	8.4%
8.article	83	11.6%
9.Double negative	49	6.8%
10.Sentence fragment	117	16.4%
total	711	100%

Table1: analysis of errors produced by Algerian EFL learners.

Now the researcher will present the ten types of errors the students made in their essays.

1. Verb tense:

Errors of wrong tense or wrong verb occur when a learner uses the wrong verb tense in a certain sentence. The results of this study reveal that the participants were not aware of applying the correct tense to the verb in the sentences.

Error identification:

1. People don't likes politicians.
2. A lot of families has problems.

Error correction

1. People don't like politicians.
2. A lot of families have problems

2. Double negative:

A double negative occurs when two forms of negation are used in the same sentence.

Error identification:

1. Most students don't have no idea about the LMD system .
2. Students don't have nothing to practice in the campus.

Error correction:

1. Most students have no any idea about the LMD system.
2. Students don't have anything to practice in the campus.

3. Sentence fragment:

A sentence fragment is a group of words that is only part of a sentence and does not express a complete thought. Usually sentence fragments are pieces of sentences that have become disconnected from the main clauses. Some fragments are incomplete because they lack either a subject or a verb.

Error identification:

1. Teachers who teach us very qualified.
2. Sometimes practise football or handball on weekends..

Error correction:

1. Teachers who teach us are very qualified.
2. Sometimes I practise football or handball on weekends.

4. Subject /verb agreement:

Subjects and verbs must agree with one another in number (singular or plural). Thus, if a subject (the person or thing doing the action) is singular, its verb (the word representing the action) must also be singular; if a subject is plural, its verb must also be plural.

Error identification:

1. A lot of people in Algeria is not happy about the services.

2. Each of the groups have 32 students.

Error correction:

1. A lot of people in Algeria are not happy about the services.
2. Each of the groups has 30 students.

5. Capitalisation:

Capitalization means writing a word with its first letter as a capital letter (upper-case letter) and the remaining letters in small letters (lower-case letters).

Error identification:

1. algerians like football so much.
2. My friend ahmed and i practise sport in our free time.

Error correction:

1. Algerians like football so much.
2. My friend Ahmed and I practise spoet in our free time.

6. Word order:

Word order is the syntactic arrangement of words in a sentence, clause, or phrase.

Error identification:

1. I like also to go to the internet.
2. What they are doing for young people?

Error correction:

1. I also like to go to the internet.
2. What are they doing for young people?

7. Spelling:

Spelling means the act or process of writing words by using the letters conventionally accepted for their formation.

Error identification:

1. My favourite ***hoby*** is reading history books
2. ***Gramar*** is one of the difficult modules we study.

Error correction:

1. My favourite ***hobby*** is reading history book
2. ***Grammar*** is one of the difficult modules we study.

8. **Prepositions:**

A preposition is a word that shows the relationship between a noun or pronoun and other words in a sentence. It links nouns, pronouns and phrases to other words in a sentence. The word or phrase that the preposition introduces is called the object of the preposition. A preposition usually indicates the temporal, spatial or logical relationship of its object to the rest of the sentence. The great majority of the participants in this study demonstrated confusion for the right usage of prepositions as shown in the examples below.

Error identification:

1. I am interested ***on*** educating myself.
2. Authorities must take care ***about*** jobless people.

Error correction:

1. I am interested ***in*** educating myself.
2. Authorities must take care ***for*** jobless people.

9. **Articles:**

An article is a word that is used with a noun to indicate the type of reference being made by the noun. English has two articles: "**the"** and "**a/an**". "**The"** is used to refer to specific or particular nouns; **a/an** is used to modify non-specific or non-particular nouns. We call "**the"** the *definite* article and "**a/an"** the *indefinite* articles.

Error identification:

1. Algeria is very rich country.
2. Normally we are ***richest*** people in the region.

Error correction:

1. Algeria is ***a*** very rich country.
2. Normally we are **the *richest*** people in the region.

10. **Pronouns:**

A pronoun is a word that takes the place of a noun. We use pronouns to make sentences less weighty and less repetitive. They are classified into several types, i.e., the personal pronoun, the demonstrative pronoun, the interrogative pronoun, the indefinite pronoun, the relative pronoun, the reflexive pronoun, and the intensive pronoun.

Error identification:

1. The subjects ***who*** I study at university are very difficult.

2. My Friends and ***myself*** practise a lot of sports.

Error correction:

1. The subjects ***which/that*** I study at university are evry difficult.
2. My friends and ***I*** practise a lot of sports.

5. Conclusion:

This study has given an account of the main errors made by a group of Algerian EFL learners at university level in their written and spoken work**.** Based on the discussion of the findings and the examples given, it could be concluded that the Arabic speakers in this study committed a great number of errors due to L1 transfer. The overt influences of Arabic on the students' writing and speaking of English indicate that language teachers need to take careful stock of the transfer and interference of the students' mother tongue in their spoken or written production. Therefore, one way to highlight the influences of the mother tongues on the students' learning of English is to collect these errors and ask the students to analyze them and if they could to correct them.

Some errors need to be handled; otherwise, they will become fossilized. EFL teachers should be aware of what is going on in the field of Error Analysis and keep a keen eye on the related theories. In addition, while placing an emphasis on error correction in the classroom, as language teachers, we should take the teaching objectives, students' linguistic competence, their affective factors and the effectiveness of the error correction into consideration. Consequently, we can employ more flexible strategies in error correction and make more contributions to the EFL classroom teaching and learning

Error analysis is significant, but it also has its limitations. First, there is a danger in too much attention to learners' errors and in the classroom teacher tends to become so preoccupied with noticing errors that the correct utterance in the second language will go unnoticed. While the diminishing of errors is an important criterion for increasing language proficiency, the ultimate goal of second language learning is the attainment of communicative fluency in a language. Another shortcoming in error analysis is the overstressing of production data. Factually language comprehension is as important as production. It also happens that production lends itself to analysis and thus becomes the prey of researchers, but comprehension data is equally important in developing an understanding of the process of language acquisition. Thirdly, it fails to account for the strategy of avoidance. A learner who for one reason or another avoids a particular sound, word, structure or discourse category may be assumed incorrectly to have no difficulty therewith. The absence of error therefore does not necessarily reflect native like competence since learners may be avoiding the very structure that poses difficulty for them. Finally, error analysis can keep us too closely focused on specific languages rather than viewing universal aspects of language.

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EXAMINING THE METHODS AND STRATEGIES WHICH CLASSROOM TEACHERS USE IN THE EDUCATION OF GIFTED STUDENTS

Feyzullah ŞAHİN[1], Faruk LEVENT[2]
[1]Düzce University Education Faculty,
Special Education Department, Düzce, Turkey
feyzullahsahin@duzce.edu.tr
Marmara University, Ataturk Education Faculty,
Department of Educational Sciences, Istanbul, Turkey
faruklevent@gmail.com

Abstract: Teachers are the leading people who are the most responsible for students' education. The method and strategies that the teacher chooses influence the student's academic, cognitive and affective development directly. In each class, there are students whose cognitive qualities are different from each other. Gifted students differentiate from their peers in relation to their learning speed and perception capacity in terms of their potential when compared with their peers. The teacher plays a critical role in the development of inborn competent of these students having such qualities. The aim of this study is to examine the methods and strategies which classroom teachers know and use in the education of gifted students.

The research population is composed of classroom teachers working in formal educational institutions within the borders of Tekirdağ city. Taken into consideration attainability, 177 teachers from 72 schools out of the research population were included in the study with the method of random sampling. In the research, interpretive sequential design was used as a model. The study was implemented in two phases. In the first phase, data were collected from teachers participating in the research on the methods they know and use in educating gifted students through a form made up by the researchers. In the second phase, interviews were implemented with 17 of the willing teachers participating in the first phase of the study in order to determine the method/ strategies they use in educating gifted students and the problems they encounter while using the method/strategies. As a device of data collection, semi-structured interview forms developed by the researchers were used.

As a result of the research, it was discovered that the strategy which is the most known and used is "resorting to the supplementary reading sources". The problems they encounter while using the method/ strategies they know are crowded classes, too much workload, economical limitations in attaining materials and equipment, lack of knowledge and insufficiency of in-service education.

Keywords: Gifted student, classroom teacher, method, strategy, teacher education

INTRODUCTION

Gifted students differentiate from their peers cognitively in terms of their perceptional speed, learning depth and their interests. These students need comprehensive educational opportunities and services which cannot be supplied with normal programmes (Renzulli & Reis, 1985; Csikszentmihalyi & Robinson, 1986). General educational classes consisting of students at the level of mixed ability are relatively lower than gifted students' levels.

The teacher is a teaching leader who knows the individual differences of students in his class and establishes teaching experiences which are suitable for this. When considered that each student has different interests, abilities and skills, educational programmes need to be organized in such a way that they can meet the student's needs (Levent, 2011).

According to Bloom taxonomy, while a student with average intelligence needs activities related to the application level that can be said to be high level and upper gains (analysis, evaluation, creation) less, the gifted student is more prepared to acquire gains including advanced thinking processes (Gross, 2004). Therefore, they need education focusing on developing problem solving skills as well as creative and critical thinking skills.

When considered in the context of the education of gifted students, what is expected basically from teachers is that they should know teaching strategies that can be implemented to students whose cognitive capacities are higher than their peers (Karnes, Stephens & Whorton, 2000; Rogers, 2007; Sak, 2010) and that they should have the ability to develop the advanced thinking skills of these students (Rogers, 1989; Karnes, Stephens & Whorton, 2000; Rogers, 2007).

The researchers who are accepted as the authority in the area of the education of gifted students argue that teachers should know the characteristics of gifted students very well in order to meet the educational needs of these students and that they should have enough knowledge in the subject of differentiation of curriculum (Pigge & Marso, 1987; Cross & Dobbs, 1987; Feldhusen & Huffman, 1988; Hanninen, 1988; Lyon, Vaassen & Toomey, 1989; Parke, 1989; Hansen & Feldhusen, 1990; Cramer, 1991; Feldhusen, 1991; Copenhaver & McIntyre, 1992; Feldhusen,

1997; Davalos & Griffin, 1999; Gallagher, 2000; Toll, 2000). On the other hand, the researches covering classroom teachers (Gökdere & Ayvacı, 2004; İnan, Bayındır & Demir, 2009; Şahin, 2013), teachers from different branches (Robinson, 1985; Johnson, Vickers & Price, 1995; Gökdere, Küçük & Çepni, 2003; Gökdere, 2004; Gökdere & Çepni, 2005; Kontaş, 2009; Hemphill, 2009; Kıldan, 2011; Dyrda, 2012) and the candidates of preschool ushers teachers (Şahin, 2012) indicate that teachers' knowledge regarding gifted students is not enough. The main strategies used in the education of gifted individuals can be called acceleration, enrichment and grouping. With enrichment strategy, it is aimed to develop creative thinking, problem solving, critical thinking and scientific thinking skills. In the content, there are subjects where these processes are developed, projects, performance homework and activities. The projects of independent studies and researches, visiting cultural and scientific areas or vocational institutions, inviting speakers, weekend programs, learning centres made up in the classes or school's source room, activities implemented within the scope of counselling, summer programs or camps can be given as the examples of enrichment in content (Ataman, 2004; Davaslıgil, 2004).

Acceleration is a strategy based on enabling a student to participate in the program based on his proficiency instead of calendar age. There are different types of implementations such as acceleration, taking lectures from the university, being enrolled in school early, international bachelor program, enrolling in two different programs simultaneously, curriculum compacting and taking lessons from the upper classes (Sak, 2010).

Grouping is to give education by bringing together students whose skills, interests and learning styles are similar. In relation to teaching aims, different grouping types can be constructed. These can be counted as: special school, school within school, fully special class, part-time special class, XYZ classifying, mixed ability class, regrouping based on the lesson, accelerated class, similar skill groups in the class, mixed skill groups in the class and multi-levelled groups in the class (Benbow, 1998).

The aim of this research is to investigate method/ strategies which classroom teachers working in general elementary schools know and use and the problems they encounter with while using these. Within the framework of this aim, the following questions are tried to be answered:

1. What method/ strategies do classroom teachers know and use in the education of gifted individuals?
2. What kind of problems do they encounter with while using method/ strategies they know and use in the education of gifted individuals?

METHOD

Research method

In this research, interpretive sequential design which is one of the mixed designs was used in order to determine the method/strategies which teacher know and use in the education of gifted students in their classes and the problems which teachers encounter with while using these methods/strategies. The reason for choosing this design is that qualitative data was consulted in order to explain quantitative data obtained initially (Cressweel, 2003).

Working group

Two different sampling methods were used in order to maintain the study in two phases and implement both qualitative and quantitative data devices together. In the first phase of the research, simple random sampling method was preferred. While the working group was made up, it was considered that teachers actually work in Tekirdağ city in Turkey, that they work at a formal elementary school, and that at least a gifted student was identified in their class. In this context, 121 schools provincial-wide in Tekirdağ were visited, and teacher having these criteria were determined. Through this way, data were collected from 177 teachers in 42 different schools.

In the second phase of the research in which qualitative data were collected, the working group which was interviewed according to the purposeful sampling method was decided on. According to this sampling method, the individuals carrying the criteria determined earlier were selected as the sampling (LeCompte, Preissle & Tesch, 1993). Thus, it was aimed to study in depth the cases which were thought to have rich information. The research was implemented between October 2012 and January 2013.

In the first phase of the study, the gender, age, graduation grade, vocational seniority of the teacher who the data collected from, whether or not they took education concerning this subject and the class size were determined. 85 of the participants (48%) were female while 92 (52,00%) were male. 10 of the teachers (5,60%) were between 20-25 age group, 18 (10,20%) between 26-30, 22 (12,40%) between 31-35, 23 (13,00%) between 36-40, 47 (26,60%) between 41-45, and 57 (32,20%) were 46 and over. All the teachers (100%) were bachelors. Moreover, 28 of them (15,80%) have worked for 5 and less, 23 (13%) between 6-10 years, 28 (15,80%) between 11-15 years, 27 (15,30%) between 16-20 years, and 71 (40,10%) 21 years and over in their teaching job. Four of the teachers (2,26%) stated that they took education concerning the subject while 173 (97,74%) said that they did not take any education for this subject. The distribution of the teachers' class sizes change between 17 and 37.

The qualities of 17 teachers included in the second phase of the study are given below: 8 of the teachers (47,06%) who were interviewed were female while 9 (52,94%) were male. 5 of these teachers (29,41%) were between 26-30 age groups, 6 (35,29%) were between 31-35 years old, 5 (29,41%) between 36-40, and 1 (5,88%) was between

41-45 years old. All the teachers (100%) were bachelors. 3 of the teachers participating in the study have worked for 5 years or less, 5 (29,41%) between 6-10 years, 6 (35,29%) between 11-15, and 3 (17,65%) between 16-20 years in their teaching job. 2 of the teachers (11,75%) expressed that they took education regarding the subject while 15 of them (88,25%) expressed that they did not take this kind of education. The distribution of the teachers' class sizes change between 20 and 34.

Data collection devices

Data were collected in order to find out the methods which the teachers know and use in the first phase and to find out the problems which they encountered with while using these method/strategies. Quantitative data collection device was used in the first phase while qualitative data collection device was used in the second phase.

In the first phase, a data collection form developed by the researchers was used. The data collection form was composed of six questions for finding out the participants' vocational and personal qualities and two open ended questions for determining the methods/strategies which they knew in the education of gifted students and which of these methods/strategies they use. The answers given to the open ended questions were written in the data form by the ones conducting surveys. Then, the accuracy of the written things was affirmed by being read to the teachers. The research data were collected with the help of 30 university students, eager for the study, who took the lecture "Research Method and Techniques". While the data were collected, the face-to-face interview technique was used. The interview technique out of qualitative evaluation devices was used in order to determine what kind of problems the teachers encounter with while using the method/ strategies they prefer in the education of gifted students. The interview data were collected by means of a form prepared according to the semi-structured interview technique. This technique was preferred since it is a very effective method to collect data concerning individuals' experiences, opinions, complaint, feelings and beliefs (Yıldırım & Şimşek, 2011). The interview from consisted of a single question. In the face-to-face interviews with the participants, a sound recording apparatus was used in order to prevent the data loss. Then, the sound recordings were transcribed and made ready for the analysis. In the next stage, the transcription of the interview data was made to be confirmed by the teachers. The interviews were carried out by 17 of the eager teachers who participated in the first phase of the study.

Data analysis

In the analysis of the quantitative data in the research, the frequencies and percentage of the answers the participants gave were calculated. The analysis of the quantitative data was performed by means of the inductive analysis out of the content analysis types (Miles & Huberman, 1994; Yıldırım & Şimşek, 2011). In the content analysis, firstly the answers which the participants gave to the questions in the interviews were transcribed. NVIVO 10 content analysis program was in the analysis of the research data. In the first stage of the data analysis, the answers given to the question were analysed by the researchers, and themes, sub-themes, codes and frequencies emerging as a result of these analyses were made up of. Also, codes in the form of S1were given to each participant in order to hide their identities, and the names of the schools where they work were kept secret.

FINDINGS

The Methods/ Strategies which the teachers know and prefer to use

In the research, it was firstly tried to determine the methods/ strategies which the teachers know in the education of gifted students in their classes. The percentage and frequencies of the methods/ strategies which the teachers know are given in Table 1.

Table 1. The methods/ strategies which the teachers know

The known methods/strategies	n	%
Using to supplementary reading sources	100	56,50
Using the grouping strategy	45	25,40
Individualizing education	29	16,38
Consulting to in-class creative techniques (brainstorming, six thinking hats)	21	11,86
Increasing the hardship levels of activties	16	9,04
Giving additional responsibility in the class (assistant teacher)	8	4,52
Using to the technique of enrollment upper class	6	3,40
Taking credits from the upper classes	2	1,10

When the methods/ strategies which the teachers know were examined, it was discovered that the most well-known method/ strategy is "Using to supplementary reading sources" (56,50%). It was respectively followed by "Using the grouping strategy" (25,40%), "Individualizing education" (16,38%), "Using to in-class creative techniques (brainstorming, six thinking hats)" (11,86%), "Increasing the hardship levels of activties" (9,04%), "Giving additional responsibility in the class (assistant teacher)" (4,52%), "Using to the technique of enrollment upper

class" (3,40%) and "Taking credits from the upper classes" (1,10%). The percentage and frequences of the methods/strategies which they use in the education of gifted students are given in Table 2.

Table 2. The methods/ strategies which the teachers use

The implemented methods/strategies	n	%
Using to supplementary reading sources	76	42,90
Individualizing education	22	12,43
Giving additional responsibility in the class (assistant teacher)	21	11,90
Using the grouping strategy	10	5,60
Increasing the hardship level of activities	9	5,10
Using to in-class creative techniques	8	4,50
Using to the technique of enrollment upper class	1	0,60
Taking credits from the upper classes	-	-

When the methods/strategies which the teachers use were examined, it was determined that the mostly implemented method/ strategy was "Using to supplementary reading sources" (42,90%). It was respectively followed by "Individualizing education" (12,43%), "Giving additional responsibility in the class (assistant teacher)" (11,90%), "Using the grouping strategy" (5,60%), "Increasing the hardship level of activities" (5,10%), "Using to in-class creative techniques (brainstorming, six thinking hats)" (4,50%), and "Using to the technique of enrollment upper class" (0,60%). Also, although "Taking credits from the upper classes" took part in the well-known strategies, it was discovered that it was not consulted in the implementation.

The problems encountered while the preferred methods/ strategies were used

Another subject examined in the research was what kind of problems the teachers encountered with while they used the methods/ strategies they consulted to in the education of gifted students in their classes. The percentage and frequencies of the data obtained from the inetrviews performed with the classroom teachers are given Table 3.

Table 3. The problems which the teachers encountered with while implementing the methods/strategies

The problems encountered	n	%
Insufficient knowledge and inadequacy of in-service education	10	58,82
Crowded classes	9	52,94
Excessive workload	7	41,18
Economical limitations in reaching educational materials and equipment	5	29,41

A large number of teachers who were interviewed stated that the primary one of the problems which they encountered while implementing the methods/strategies they know in the education of gifted students was insufficient knowledge and inadequacy of in-service education (9/17).

> *"... I was asking more difficult questions than those I was asking to the others. I discovered that he began not to do his homework, and I began to give him homework which I gave to the others... I was performing group studies, the other children made him all of their homework and studies, and I cancelled the group studies as I could not stand..."* (S12)
>
> *"... I was consulting to such methods as brainstorming and creative activities in the class. But brilliant ideas did not come from the other students, all the brilliant ideas came from my gifted student. Despite all, education cannot be maintained through only one student, and I abandoned these methods since the others found them difficult..."* (S16)
>
> *"After I began to work as a teacher at school, there was a gifted student in my class. I was surprised and did not know what to do as I was always accustomed to giving education to normal students. I wish National Education Directorate sometimes had given education in this subject and I would have remembered my previous knowledge..."* (S8)
>
> *"You do not always encounter with a gifted student, every three or five years... I had a gifted students in the thirteenth year of my job. I teached the lessons so routinely that I often had to exert myself in order to show enough interest for this child by exceeding the borders... By the way I began to assign him difficult tasks, I realized that he began to be at odds with his friends, and I gave up, behaving him as I did others..."* (S11)

As can be understood from the teachers' expressions above, it can be said that teachers have insufficient knowledge in the education of gifted students and need in-service education. This case was stated openly in the opinions of S8 and S11 concerning insufficient knowledge and the need for in-service education. It can be seen that S12 and

S16 had the low awareness of the implementation of the methods/strategies although they had some knowledge regarding the education of gifted students.

A number of the teachers (9/7) stated that crowded classes obstruct the education of gifted students. In addition to making it difficult for the teacher to interest students personally in a course hour, crowded classes also cause the lessons to be studied in accordance with the majority of students in the class. Despite this, the teacher can provide teaching support for gifted students needing special education even in crowded classes by using various methods/strategies. The striking ones out of the teachers' opinions concerning the subject are given below:

> *"My most important problem is that my class is crowded... The child is identified as gifted and continues my class. I do not give education to the gifted student on my own. What will be to my other students? I must also teach them some things. When you explain the subject to the general group, then the gifted student gets bored... I must prepare some extra studies for this student, but I do not have enough time"* (S3)
>
> *"... I have been assigned as an assistant teacher for the gifted student. Thus, the other students are jealous of him, either they beat him before I realize it or they do not permit him to join in their plays. When I do not give him tasks, he gets at odds with me..."* (S10)

When the opinions of the participants codified as S3 were examined, it was seen that they complained of the crowded classes and the fact that the teachers cannot spare enough time for the gifted student in such a surrounding. The opinions of S10 were similar to those of S3.

Some teachers (7/17) expressed that excessive loadwork prevents the education of gifted students. Too much workload, working for a long time, exhausting work cause the teachers to feel that they have too much workload. This case leads the teachers to make no effort for gifted students who need special education. This case can be seen clearly in the opinions of the participants below.

> *"... I cannot spare time for both suplementary homework and creative activities... There are other things in the class, too. I have many students. I cannot handle all since I have too much workload."* (S10)
>
> *"As classroom teachers, we have to do so much unnecessary work on a day that there is not any time to do our basic work..."* (S14)

It is seen in the opinions of the participants codified as S10 that although they know such techniques as giving creative activities and supplementary studies to gifted students, they cannot implement them because of complaining of them.

Some teachers interviewed (5/7) stated that inadequacy of materials and sources poses an important problem in the education of gifted students. The teachers' expressions supporting this idea are given below.

> *"The gifted students in my class comes to school with difficulty. On some days, he cannot find any money for his lunch. I wanted this student to buy a book for the acitivity ouside the school I planned. He accepted, but he could not buy the book. I bought it. My salary is scarcely sufficient for me. At least, I wish soem could provide support for stationary equipment and materials."* (S7)
>
> *"... In order to provide a gifted student with additional education, we need a lot of materials and equipment. We do not have any support for these to be supplied..."* (S15)

The fact that the teachers expressed that they cannot take any support from any centre or institution support for the supply of sources regarding the education of gifted students proves that there is inadequacy of sources and materials in this area. This case shows that the education of gifted students can be maintained with the materials and equipment that teachers can supply.

DISCUSSION

In this study, the methods/ strategies which teachers know mostly and use in the education of gifted individuals and the problems they encounter while implementing these methods/ strategies.

When they were asked about the methods/ strategies they know, they gave ten different answers. The mostly well-known and used strategy was expressed as "Using to supplementary reading sources". The least well-known and used strategy was expressed as "Taking credits from the upper classes". According to Özcanar and Bildiren (2012), using to supplementary reading sources which were stated as the most well-known startegy is among the lowest support studies which can be consulted in the education of gifted students. The fact that taking credits from the upper classes is the least well-known strategy can be said to stem from the fact that it is not possible legally to be implemented due to the Turkish national educational system.

The teachers within the scope of the research expressed that the problem which they encounter with mostly while implementing the methods/ strategies which they know is crowded classes and excessive workload. The working group teachers work in the public sector. In the public sector, the workload of classroom teachers' lessons is about 6 hours on average. In a week, work shift is carried out during five days. They can spare their time other than this for personal development or the studies connected with their job. Their colleagues working in the private sector attend six hours of lessons as well as two hours for the other studies about students. On Saturdays, they attend four hours for etud on average. That is, while a teacher in a public sector works around 30 hours a week, his colleague

in a private sector works around 44 hours a week. According to two different studies of Şahin (2012) and Şahin (2013), it was determined that teachers working in the private sector regard 45 hours of work and over totally in a week as the excess of workload while teachers working in the public sector regard 30 hours of work and more totally in a week as the excess of workload. Therefore, the fact that the teachers whose opinions were consulted in this study work in the public sector is effective on their perception that their workload is excessive.

The class size of the teachers whose opinions were consulted changes between 20 and 34 students. It is difficult to give a precise number concerning how many students an ideal class should be made up of. The more a class size increases, the less the time which a student spends with his teacher personally becomes. On the other hand, a lot of methods and strategies under the grouping the strategy in crowded classes can be mentioned. In the crowded classes consisting of students at the level of mixed skills, lots of methods and strategies such as teaching contacts, independent project studies (Tomlison, 1999), grouping in-class similar or different skills (Benbow, 1998). Other than this, lots of methods/ strategies can be mentioned. For instance, Smith (1998) mentions 172 different strategies which can be used in order to develop creative thinking (Sak & Oz, 2010). But the teachers whose opinions were consulted mentioned a limited number of strategies/ methods. This finding implicitly signifies insufficient knowledge and the need for in-service education. The fact that insufficient knowledge and the need for in-service education are among the problems which teachers encounter with while implementing the methods/ strategies they know emerges as another problematic area. The data obtained from the interviews confirm the descriptive data in relation to the methods/ strategies they know and use.

The basic factor in the working group teachers' insufficient knowledge and the need for in-service education can be said to be the fact that there is not any compulsory course concerning gifted students and these individuals' education in classroom teachers' university education. Teachers who did not have enough education concerning gifted students are incompetent in meeting the educational needs of these students (Hanninen, 1988; Archambault *et all.,* 1993; Dobyns & Salvin, 1993; Hansen & Feldhusen, 1994; Feldhusen, 1997; Westberg, Archambault, Westberg & Daoust, 2003) and generally do not have enough knowledge regarding how they should treat gifted students (Winebrenner, 2000; Dyrda, 2012;).

Some experts argue that teachers should be given education in the pre-service education in order to meet the educational needs of gifted students (Sisk, 1987; Feldhusen & Huffman, 1988; Greenlaw & McIntosh, 1988; Rogers, 1989; Shore, 1991; Copenhaver & McIntyre, 1992; Dettmer, 1993; Tomlinson *et all*., 1997). According to these experts, carrying out teaching implementations which can meet the educational needs of gifted students can be made possible by means of teachers' having teaching knowledge in this area (Hall, 1983; Mertens, 1983; Parker & Karnes, 1987; Cross & Dobbs, 1987; Rogers, 1989; Ginocchio, 1990; Meade, 1991; Lieberman, 1995; Taplin, 1996; Davison, 1996; Sullenger, Cashion & Ball, 1997; Gallagher, 2000; Toll, 2000; Clinkenbeard & Kolloff, 2001; Darling-Hammond, Chung & Frelow, 2002). Through holding in-service educational programs, the opportunities of professional development for the education of gifted students can be offered to teachers (Ball & Cohen, 1999; Reis & Westberg, 1994). Thus, it can be enabled for them to both develop positive attitudes to students and increase their knowledge level concerning differentiated programs (McLeod & Cropley, 1989).

In a study, Hanninen (1998) discovered that teachers taking in-service education related with the education of gifted students implement different teaching techniques which aim at satisfying their personal interests in order not to make them bored in the class, even these teachers support them to continue their learning activities outside the school. On the other hand, Westberg and colleagues (1993) expressed that it is not effective and enough to explain teachers in the education given regarding gifted students what they should do, but to indicate them how they should these things. Therefore, teachers should be offered the opportunity to work with gifted students in their education in the pre-service period (Southern& Jones, 1991). In this context, many experts (Feldhusen & Huffman, 1988; Kagan, 1992; Starko & Schack, 1989; Copenhaver & McIntyre, 1992; Dettmer, 1993; Tomlinson *et all.*, 1997) claim that gifted students can be raised by means of the direct interaction of teachers in the education of gifted students. Even Joyce and Showers (1988) stated that teachers can learn effective and complex teaching strategies if they attend well designed in-service education activities.

The economical limitations in reaching the educational materials and equipment are another matter mentioned among the problems which the teachers encountered while using the methods/ strategies. In most of the developed countries such as America, Canada and Austria, there is a large amount of governmental support for the education of gifted students whose economical standards are low. Nonetheless, the governmental for the education of gifted students in Turkey is quite limited. Social and monetary assistance for these individuals is limited with those provided by the local authorities or people (Levent, 2011). But the fact that the teachers have the opinion that "If the educational material is not found, education is interrupted" is challenging. Because students can be made to gain teaching aims through using different materials if a education materiel is not reached or reached in a limited way. Then, the teachers' opinions regarding the lack of educational materials and equipment indicate insufficient knowledge and inadequacy of in-service education.

CONCLUSION AND SUGGESTIONS

In this research, it was aimed to determine the methods/ strategies which classroom teachers know and use and the problems which they encounter with using these methods/ strategies. In the result of the research, it was discovered that teachers have insufficient knowledge for the subject and need in-service education.

There are research findings which show that teachers who do not have sufficient knowledge in the area of the education of gifted students make mistakes in relation to students' academic needs, social and emotional development. In a study performed by Bain and his friends (2007), it was found out that teacher candidates think that acceleration model has a negative influence on gifted students and program for gifted students make up an elite group and that this kind of students can be successful without special service. In another study performed by Bain, Choate and Bliss (2006), it was discovered that teacher candidates think that all gifted students display the same qualities and that these students are in a simultaneous development in different areas instead of a development which is not simultaneous.

In different phases of education, teachers' competence for gifted students and their education can be increased. These phases can be counted as pre-service, before beginning to work after the selection, in-service education and post-graduate education. In many studies conducted, it was discovered that the competence of teachers taking education on gifted students increased within the scope of knowing gifted students (Robinson, 1985; Rohrer, 1994; Johnson, Vickers & Price, 1995; Şahin & Çetinkaya, 2013) and developing teaching strategies in the education of gifted students (Reis & Westberg, 1994; Johnson, Vickers & Price, 1995). Besides, across the world, one of the mostly used methods in educating and raising teachers taking on responsibility in the education of gifted students is that teachers graduating from any teaching program continue to attend an additional certificate program or summers courses (Cramer, 1991; Karnes & Marguart, 1995; Karnes & Whorton, 2000).

In accordance with the results of the research, the following suggestions can be given to the head of school, policy determiners and makers:

- In-service educational programs which can enable teachers to take applied education on gifted students and their education can be held by MEB. In these types of education, especially activities which are predominantly based on implementation can take part in order to develop teachers on the material use and production.
- In universities' education faculties, information on the qualities of gifted students and their education takes part only as a unit in pre-school, elementary and secondary teaching programs. In this context, a lecture in education faculties which can make teacher candidates gain sufficient information grounding and increase their awareness on this area can be offered.
- A guide book on activities and methods/strategies which will be used in the education of gifted students can be prepared for teachers by Ministry of National Education (MEN).
- At the local and national level, a web based platform or network in which teachers can share their experience concerning the education of gifted students can be constructed. Thus, teachers can share implementations they perform with gifted students and methods/strategies they use with their colleagues.
- The materials and sources which teachers need in the education of gifted students should be supplied by the government. The local authorities, voluntary institutions, non-governmental organisations, foundations and associations, professional chambers and chambers of trade, shareholder institutions in all sectors can take on responsibility to meet the source need in this area.
- Stimulating rewards can be given to teachers who perform successful implementations and example projects with gifted students by MEN or the local authorities.
- The studies which can enable cooperation between teachers working at schools and those in Science and Art Centres being active across the country to increase and the collective project spirit to be developed can be performed.
- The tasks and responsibilities of school guidance teachers include giving expert support to teachers on knowing students who need special education and the education of these students. In-service education studies which can increase the sensitivities of guidance teachers working at schools on the subjects of the needs and qualities of gifted students and their education can be given. Therefore, school guidance teachers can guide teachers correctly on the education of gifted students and give them professional support on which methods/ strategies should be used.

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Exploring the use of WordPress in a literature lesson based on ASSURE Model

Tan Shin Yen[1], Siti Hajar Halili[2]
[1]Department of Curriculum & Instructional Technology,
Faculty of Education, University Malaya
[2]Department of Curriculum & Instructional Technology,
Faculty of Education, University Malaya
ajai912@gmail.com

Abstract: This study explored the effectiveness on using of blog specifically WordPress in a literature lesson based on ASSURE model. A qualitative study was employed by the researcher and interviews were conducted with five secondary students in a Malaysian secondary school. The literature module used in this study was developed using the ASSURE model which acts as a guide for lesson planning and instruction which involves instructional technology. In terms of findings, three key themes identified: (1) "I may not favor blogging, but it is beneficial for my learning", (2) "I tend to self-reflect more than I constructively contribute", and (3) "Blogging opens my eyes to learning literature". With the rapid expansion of technology, the study provided wider implications and help institutions to understand which methods work best to develop course materials and techniques appropriately for students. Literature has always been regarded as an area too abstract and complex, resulting in its reputation of being a 'dry' subject for students. Nevertheless, given the proper guidance and conducive platform, students' literature response can be highly enhanced; the act of blogging can cater to such needs.

Keywords: Blog, WordPress, literature lesson, secondary students, ASSURE model

INTRODUCTION

Ducate and Lomicka (2008) state that "in today's information technology age, Internet tools are becoming increasingly popular in educational settings" (p. 9). A large number of students, with varying background in Internet tool application, usually go to class with certain degrees of understanding and expectations already ingrained in them (Churchill, 2011) and schools need to be cognizant in igniting and nurturing their technological literacies through integration of Internet tools as instructional technology into classrooms (Hutchison & Wei, 2012; Zawilinski, 2009). These literacies range from decoding upon interaction with the interface, meaning-making upon reading the content, to communicating the comprehension of "the interface, the affordances and the unique features" of the particular Internet tool within a digital environment (Hutchison & Wei, 2012).

The constant emergence of new Internet tools creates a generation of students who view learning and are capable of learning with technology in innovative ways. Instructional technology impacts teaching and learning; be it used for the sharing learning materials during out-of-class hours (Miceli, Murray & Kennedy, 2010), or for enhancing class meetings through providing pre-class online prompts or discussions (Higdon & Topaz, 2009). To serve such purposes, one of the most widely-used online applications which is easy to operate is blog (Churchill, 2011; Zawilinski, 2009).

Blogs are "online, Web-based journals in the form of frequent, chronological publications of thoughts and ideas, typically within a specific theme or area of interest" (Dunlap & Stevens, 2009, p. 35). It is a "publicly and freely available Web 2.0" technology (Higdon & Topaz, 2009, p. 105). 'Blog', the short for 'weblog' (Greer & Reed, 2008; Zawilinski, 2009) is at its core an online platform for self-expression and sharing. Blogging came about in the 1990s and John Barger was the earliest to coin the word 'weblog' for his website in 1997 (Blood, 2004; Kaye, 2005; McGrail, 2013). Since then, the growth of blogging has been rather impressive. Such activeness could be, though not completely, implied by the escalation in number of blogs created. Nielsen (2012) reports that "by the end of 2011, NM Incite, a Nielsen/McKinsey company, tracked over 181 million blogs around the world, up from 36 million only five years earlier in 2006".

Blogs can be published either on conventional blogging websites or via social networks which integrate blog tools (Hourigan & Murray, 2010; McGrail, 2013; Nielsen, 2012). When it comes to its purpose, blogging can be very commercialized. It can be political in nature (Kaye, 2005) or highly business related. Blogging is now a major publishing business as well as a vital tool for improving brands and businesses online (McGrail, 2013). As

Rampton (2012) reports, 60% of the businesses in U.S. have a business or company blog; its impact is evident in the 61% of U.S. consumers who are found to have made purchases based on blog posts (McGrail, 2013).

Learning literature requires interaction between the reader and the text, beyond literal meanings and extends into figurative meanings (Hiew, 2010). In fact, "reading is a transactional process that goes on between a particular reader and a particular text at a particular time, and under particular circumstances" (Rosenblatt, 1986, p. 123). In reading a literary text, the students while reading, generate their own perception and interpretation after living through the text. More often than not, their meaning-making is innate and distinct from each other, and it needs being communicated among the students to magnify the aesthetic value of the text. The similarities and differences in understanding and appreciating literary texts calls for a convenient online forum like blog for sharing and discussing critical aspects. As Blackstone, Spiri, and Naganuma (2007) put it, blog posts provide that opportunity to express opinions, particularly on the controversial facets of the content being discussed.

Blog in literature, which some may call literature response blog, in fact moves the idea of literature response journal to an online medium (Zawilinski, 2009). Hiew (2010) further explains that a "literature response journal required students to write on a given topic pertaining to the characters, settings, values, and their personal thoughts and feelings on certain matter at the end of the literature lesson" (p. 28). The idea of a literature response blog is similar to a literature response journal where teacher posts a prompt to invite student responses to a text. Although literature response journal has quite some history (see Hancock, 1992), the use of blog to elicit students' personal response is just beginning to be examined by practitioners. In a recent study on blogging as a form of literature response, Hutchison and Wei (2012) propose that blogging can be a safe and structured space for literature dialogues in order to induce critical responses to literature.

Responding to literature through blogging and through journal-writing is by far different although the basic process is to write. Blogging happens within a virtual community and a social context, thus making it very different from the individual literature response journal which is more private. In blogging about literature, students get to stay connected in their literature circle and share their responses with teacher and classmates alike, and are able to be involved in discussions and collaborative tasks. The generation of literature dialogues to cater to the exchange of comments and critique among readers is one important way to enhance literary appreciation (Hutchison & Wei, 2012).

Blogs in the literature classroom have a huge impact especially in the Malaysian educational setting. In Malaysian classrooms, literature to students has often been labelled as arduous and difficult-to-understand, most probably due to the complexity in trying to tackle literal and figurative meanings (Hiew, 2010). Govindarajoo and Mukundan (2013) who have investigated young adult literature in the Malaysian secondary school point out that research in the Malaysian context to understand students' experience in learning literature, one which involves depth and reflection, is inadequate. What has been a vicious cycle is the neglect of the students' personal responses in learning literature. Rosenblatt's (1986) view still holds true till today, that we should question if our students are nurtured "to savour and deepen the lived-through experience, to recapture and reflect on it, and to organize their sense of it" (p. 126). This module serves to look into how blogging could cater to these needs for students learning literature.

To further explore the prospective of blogs in educational settings, this study essentially investigates the introductory use of blogs among secondary students learning literature. The blogging platform used in this module is WordPress, an open-source software appropriate for building a full-blown website; users can "upload pictures, add text, install free plugins, create pages, change the look and feel of the website" with just a click (*How to use WordPress tutorial, 2012*). Although it is now a full-scale content management system (CMS) where websites could be built without much knowledge of HTML, CSS, Javascript and so forth, it humbly started in 2003 merely as a blogging system. In 2011 and 2012, WordPress was reported as one of the top two blogging sites in the U.S. – together with Blogger (Nielsen, 2012; Rampton, 2012). Impressively, over 60 million people have opted for WordPress (*WordPress.org*, n.d.). The literature module used in this study was developed using the ASSURE model which acts as a guide for lesson planning and instruction which involves instructional technology. Thus, the main objective is to understand how students react toward a literature module which introduces them to blogging activity and its use as a learning activity in a literature lesson.

METHODOLOGY

In order to investigate the use of blogs, specifically WordPress, among secondary students learning literature, a qualitative study was employed by the researcher and interviews were conducted with five secondary students in a Malaysian national type secondary school. The literature module used in this study was developed using the

ASSURE model which acts as a guide for lesson planning and instruction which involves instructional technology. The ASSURE model developed by Heinich, Molenda, Russell and Smaldino in 1999, was used to design a complete literature module made up of one complete lesson which comprised three blogging tasks throughout a three-week period. In brief, the development of the module is summarized in Table 1:

Table 1
The Development of Literature Module using the ASSURE Model

	Descriptions
Step 1 - Analyze Learner	All the five students who participate in this case study are 16-17 years old with intermediate language proficiency. They generally lack the ability to think from multiple perspectives when reading literary texts and their written work usually lacks depth as their understanding is only at the surface level and only from the author's point of view. Students generally have little enthusiasm when spoken to about learning literature in school. All students are passive learners in class.
Step 2 - State Objectives	The objectives are to enable students to read and respond to literary texts and express themselves creatively and imaginatively, all through their writing. Since literature and blogging are built upon the foundations of 'expressiveness', 'creativity' and 'reflection', the idea of incorporating blogging in a literature lesson seems promising. Overall, students will get to enhance their literature response and experience a different form of self-expression.
Step 3 - Select Methods, Media, Materials	The instructional technology employed is "WordPress.com".
Step 4 - Utilize Media and Materials	The lesson consists of five stages: Induction, Pre-activity, While-activity, Post-activity, and Closure (refer to the complete Lesson Plan). Basically, the main activity is to have students complete three blogging tasks in three weeks.
Step 5 - Require Learner Participation	The students are required to participate through individual writing tasks, whole-class dialogue and reflective commenting.
Step 6 - Evaluate and Revise	Students' feedback on their experience in blogging and the module is gauged using survey and interviews. From here, the module effectiveness in achieving its goal is determined. The module will then be revised for future use.

For the purpose of this module, a service called WordPress.com (see *wordpress.com*) was used. One major advantage of using WordPress blog is that we can actually "own" our blog by self-hosting it with our own domain name (though certain charges may apply but the blogging software of WordPress is generally free), in contrast to registering an account to other hosts and be bound to their terms and conditions. WordPress has enjoyed the rise to be "the largest self-hosted blogging tool in the world, used on millions of sites and seen by tens of millions of people every day" (*WordPress.org*, n.d.). WordPress is used by the students as it lets them create a new and totally free WordPress-based blog. Even though this service may not be as flexible or provide as many applications as the download-and-install version of WordPress-based blog, visiting WordPress.com and registering an account is much more accessible and convenient considering that all the students are first-time users. Any start-up procedure too complicated may hinder their budding interest and motivation for developing their blogs. Furthermore, WordPress.com is comfortably equipped with various basic and easy-to-use applications such as photo and video upload to scaffold first-timers' blogging experience. Thus, WordPress.com with interesting interface and ease of user management is appropriate for the introductory and exploratory aims of blogging (in line with the goal of this literature module).

Student Participants

The participants were purposefully identified (passive students in class) and upon approach, five out of six students consented to participate in this case study. The participants were students from the fourth and fifth form in a Malaysian national type secondary school. They were named S1, S2, S3, S4 and S5. There were three female participants and two male participants. The participants' details are summarized in Table 2. As Literature in English was incorporated as a component of the English language subject in Malaysian schools in 2000

(Govindarajoo & Mukundan, 2013), all participants learned literature in school. The short story selected was "QWERTYUIOP" which was prescribed in the text book for Literature Component for Secondary Schools - A Collection of Poems, Short Stories and Drama (Form 4 and Form 5).

Table 2
Details of the Participants

Student	Gender	Grade Level
S1	Male	Form 5
S2	Male	Form 4
S3	Female	Form 5
S4	Female	Form 4
S5	Female	Form 4

Procedures

The participants were briefed about the purpose of the study, what they could expect throughout the study as well as what would be expected of them. Basically, the students were told that they needed to complete three blogging tasks in total. The teacher-researcher explained that the module would be a literature lesson spanning across three weeks. The teacher-researcher assured the participants that this module aimed to introduce them to the use of blogging in learning literature; thus there would be writing prompts for every task (they would not be blogging without guidance). Students were introduced to and given guidance on how to navigate the blogging site (WordPress.com), the instructional technology used in the module. They were given one week to create an account and to explore WordPress.com on their own. The participants, considering their privacy rights, were given the freedom to use either their own names or pseudonyms. All the participants had easy access to each other's blogs (Blackstone, Spiri, & Naganuma, 2007) with the teacher's blog serving as the homepage.

Task 1, Task 2 and Task 3 were assigned to the participants in Week 1, Week 2 and Week 3 respectively. The participants were chiefly required to complete each blogging task based on their reading of the short story 'QWERTYUIOP'; it was fundamentally a story of determination and loyalty, a story of two main characters: Lucy and Miss Broome who haunted a typewriter. The synopsis of this short story as provided by the Ministry of Education Malaysia (2009) was as follows:

> "QWERTYUIOP" by Vivien Alcock is about a young graduate named Lucy Beckwho has just finished her "O" levels at Belmont Secretarial College. Being a slow learner herself, she has no confidence that she will find a job. Fortunately, she is offered a job by Mr. Ross, the Manager of Ross and Bannister's. During her first day, she encounters many peculiar incidents. Later, she finds out that there is a spirit lingering around the office who is adamant in holding on to her position as the company's secretary. Towards the end of the story, Lucy tries to get rid of the spirit that has been haunting that place for many years by putting the spirit at peace.

The participants' role was to complete all the three tasks online, either on the teacher's blog or on their own blogs (depending on the task requirements). The participants were encouraged to have discussion and to comment on their peers' blog posts but this requirement was not made compulsory, as the teacher-researcher would like to observe the students' natural actions without such imposition. Throughout the three weeks, the teacher-researcher observed students' online behaviors in completing all the three tasks. After the three weeks, each student blog was evaluated using the teacher-researcher-developed Rubric of Evaluation. Nevertheless, the participants were not informed beforehand that they would be evaluated as the teacher-researcher preferred that the students were indeed blogging willingly and freely without the concern of being judged by the teacher or other students. After the module completion, the participants were given feedback on their blogs. Their scores for the Rubric of Evaluation were used to gauge the students' overall behavior toward the module.

Data Collection

Before the module implementation, the teacher-researcher carried out a semi-structured pre-lesson interview with the students to gauge their understanding and background of blogging, and also their experience of learning literature in school. During the three-week module implementation, the teacher-researcher observed students' online behaviors and considered the challenges faced throughout the lesson and how the lesson could have been more effective as a whole.

Data Analysis

The researcher interviewed the participants based on a list of questions expanded from the research questions. The questions were open-ended, which allowed the participants to freely express their experience with blog, blogging and literature lessons using WrodPress. Follow-up questions were improvised during the interview. Each interview lasted approximately 60 minutes and was recorded. Finally, the interviews were used to develop three key themes for the comprehension of students' reaction and feedback towards the module.

FINDINGS AND DISCUSSION

Student Background Interview

Using the Student Background Interview, the teacher-researcher basically investigated two aspects of students' previous experience: Blogging and learning of literature in school. To students, although they were not very clear about how blogs function (especially S3 and S5), their perception was that blog was a place to express themselves and share their thoughts easily and freely. From the students' responses, it could be deduced that students did have the basic understanding of blog function although, more sophisticatedly, blog was also a multi-dimensional interactional platform. Generally, blog to students was simply an online site on which they could write about anything interesting to them.

All of them except one student had never blogged before. Some had read blogs before, like S2 and S4 whereas S3 and S5 had no exposure to reading blogs although they had heard of them. S5 expressed little knowledge about blogging. For S1 who had created a blog before, regarded his blogging experience with *"didn't really like it though*" and he in the end gave up his first trial because he "*did not have interesting things to share with people and it was troublesome to think up of even one post*". S3 who had never read a blog or blogged before, had a negative impression of blogging as she professed to dislike writing in general. It was inferred that a dislike for writing may very well lead to a dislike of writing-based activities, including blogging. Gauging her keenness to blog, she said she worried that she may not have anything to write about. On a different note, S2 was a regular reader of his siblings' blogs but this was his first time creating and managing a blog on his own. Meanwhile, S4 did check out blogs but only for irregular leisure reading. It was evident that the students were not highly optimistic about the idea of having to blog but it was also encouraging that they still showed enthusiasm to try and like blogging, provided they would be blogging with guidance and not from nothing.

With regard to students' experience of learning literature in school, it was actually quite interesting to know that none of the students had activity-based literature lessons in schools; most lessons revolved around reading the text, copying notes and completing exercises. S5 even had literature lessons where the teacher completed the reading of text with students in class and students were left with no follow-up tasks. Such a situation was in unison to the one described earlier by Govindarajoo and Mukundan (2013) and Rosenblatt (1986) where literature response was practically "dead". Literature, being one of the subjects which required the most in-depth interpretation and personal connectedness with the text, was stranded in a peculiar situation as it was taught rather didactically. Even more surprisingly, perhaps due to years of familiarity with such literature lessons, most students were fine with how they were learning literature. However, they were far from being excited or enthusiastic; perhaps they were unaware of how literature lessons could have been. Nevertheless, the desire for a change in learning literature was existent. When asked if they liked the literature lessons which they were having in school, S3 exclaimed "*Boring*!!"

Therefore, it was hoped that this module, though a brief one, would open students to a different experience in expanding their minds to reading and interpreting literature. Writing about literature, on blog especially, would benefit students in many ways. S1, S3 and S5 expressed that they would like writing about literature, mainly because they would pay closer attention to the text for better understanding. S2 was excited to write about literature as he had been copying notes from the Internet for his literature lessons and he looked forward to expressing what he thought about the text. Meanwhile, S4 saw that writing about literature would give her an opportunity to think deeper about the text, "I think more when I write".

Student Feedback Interview

Further discussion regarding student feedback toward this module was elaborated from the perspective of the three key themes:

Theme One

"I may not favour blogging, but it is beneficial for my learning."

The students in general acknowledged the good of blogging in learning although they hardly embraced the activity of blogging itself. All the students agreed that blogging motivated them to think and to express their ideas while learning. However, not all students were enthusiastic in basic blogging acts like adding a new post or checking other students' blog regularly (although most of them liked reading other student's blogs for homework-related purposes). The only thing that all the students liked was reading the teacher's blog, largely because the teacher's blog was informative and well-developed. Here, as discovered by Churchill (2011), the students seemed to pay more attention in checking the teacher's blog as well as their own, but seldom took the initiative to check the other students' blogs (unless for homework-related purposes).

Indeed the students were found to have a great sense of responsibility to complete their homework (Ducate & Lomicka, 2008). In other words, they seemed to agree to only blogging-as-a-learning-activity, and to not anticipate themselves to proceed beyond the learning activity to stay an active blogger. None gave a definite "yes" when posed with the question "*Will you start a blog in the future*?" The students continued to keep blogging at arm's length and would leave it as an enjoyable, regular learning activity. Despite the fact that all had reservations about blogging, S2, S4 and S5 pronounced more interest and motivation towards blogging on their own, provided that they had the time.

During the Student Feedback Interview, S1 mentioned that blogging seemed dull and boring to him mainly because he was not keen on sharing information with others and he felt that maintaining a blog could be time-consuming (Dunlap & Stevens, 2009). Because blogging by nature required personal time and initiative, the students were sometimes unmotivated to give such long-term commitment. As S2 admitted, he felt "*lazy*" to manage his blog although he did find blogging enjoyable. In short, some students actually found blogging tedious.

Out of the five students, S3 may not like blogging but still performed well because she knew it would be good for their learning. It was then discovered that her rejection towards blogging stemmed from her distaste for writing. "*Writing is a pressure to me*", confessed S3. Therefore, in her case, blogging as an activity or the instructional technology was not the root issue, but writing was. She was fine with blogging as a learning activity if required by the teacher and/or being graded; however voluntary blogging should not be expected of her. Other students too committed to the notion that they would be willing to blog mainly as a subject requirement and/or as part of their subject assessment; this finding was similar to the results reported by Churchill (2011), and Hutchison and Wei (2013). Assessment seemed to drive the level of student motivation and participation. As S1 said, "*I may not be into it but if it's what the teacher requests for our subject, I will do it"*.

Of all the students, in fact there was one who despite having a non-committal attitude toward blogging, claimed that she actually found blogging interesting: S5. She was quite thrilled when she added her first post as everything appeared new and fascinating to her. She realized soon that she could share her hobbies, photos and other interesting happenings in her life with others. She seemed to have explored WordPress.com more than the rest as she commented that WordPress.com was kind of limited in terms of choices of decoration and applications. This was true; for instance, bloggers could not upload mp3 files on WordPress.com without having upgraded their blog and paid the extra charges. Nonetheless, WordPress.com, being simple and easy to use was adequately effective in providing the first-timers with a "real" blogging experience.

In regard to sharing information on their blogs, the students had reservations about the virtual audience which they were cautious of. Ironically, such a facility should have been enjoyed by the students (Ducate & Lomicka, 2008; Zawilinski, 2009), instead, the issue of privacy popped up, an identical discovery to that by Dunlap and Stevens (2009). At large, the students blogged with the knowledge that their work would be viewed and shared with others; and at the same time they blogged guardedly, for the very same reason. In S1's opinion, "*I don't really like sharing things with people on the Internet whom I don't even know*". As for S4, she agreed that she would rather share on social networking sites like Facebook where only friends can view what she shared rather than on a blog site where the readers were unlimited and unknown.

Aside from intrinsic motivation towards blogging, the students' experience of blogging was also hindered by the lack of technical skills. Despite having discussed earlier that blog hardly required any sophisticated technical skills to operate (Blood, 2004; Churchill, 2011; Hutchison & Wei, 2012), some students still needed step-by-step guidance in order to be able to utilize the instructional technology efficiently. S4 lamented that to her blogging was "*kind of troublesome*" because of the blog interface. She thought that it would have been beneficial if they were provided training prior to the module implementation as it was their first time using a blogging site and all of them, except for S1, were first-time bloggers. Nonetheless, the students on the whole thought that WordPress.com was sufficiently user-friendly for them to benefit from the module.

It was realized that the students generally lacked the exposure that an online application like blog could be used for learning. The students were uncomfortable mostly because they had never displayed publicly something as significant as their homework. A situation as such added to the worry of students like S3 who lacked self-confidence; she reported that she feared embarrassment, that she was not as good as the other students (Greer & Reed, 2008). S4 too was overly self-conscious of having mistakes seen in her homework. She was most concerned about having the teacher evaluate publicly her homework on her blog. The teacher-researcher believed that this concern was in fact comprehensibly common as this was the first time most of them blogged. S1 and S2 eventually asserted that they were much more comfortable now after the module to let others view their homework on their blogs. S1 especially had a change of perception toward blogging after realizing that a blog could serve well for learning activities like group study. As a matter of fact, it was just a matter of understanding better and getting used to the facets of the instructional technology in use. For instance, S5 portrayed an optimistic attitude towards sharing her homework on her blog as she deemed this an opportunity to ask for advice for improvement which could then spark further discussion.

One crucial finding to be taken notice of was the improvement of teacher-student relationship through the use of blog in a lesson (Ducate & Lomicka, 2008; Greer & Reed, 2008). Statement 12 – "*I like reading my teacher's blog*", Statement 13 – "*By blogging with my teacher, I feel that my teacher is more involved in my learning*", and Statement 14 – "*By blogging with my teacher, I feel more connected to my teache*r" demonstrated how a teacher could impact student learning. Teaching and learning were now extended beyond the four walls of a classroom and this module has shown that blogging in learning did enhance teacher-student rapport which would then facilitate effective teaching and learning in or out of the classroom. The teacher-researcher felt that the students were able to open up more when the teacher was involved with them in completing the module. The teacher-researcher also had the opportunity to communicate with students who had usually been passive in the class; this finding confirmed the testimony contributed by Greer and Reed (2008). It was indeed mesmerizing for the teacher-researcher to realize that such quiet listeners in class did have their own ideas and thoughts to be shared. A platform for expression and sharing was what these students needed to begin with.

Another important observation of the teacher-researcher was that most of the students did not actively maintain or take the initiative to add value to their blogs. The fact that they did diligently complete each assigned task came to prove that the students essentially viewed their blogs as a learning space to complete homework. This finding was similar to what was suggested by Hutchison and Wei (2012) where students responsibly completed and posted their homework on their blogs, and logged off. From the students' work, the teacher-researcher could see the students fulfilling the requirements of each task well. The only thing was that they had neither taken full ownership of their blogs as a platform of personal expression nor as a site for social discussion. Future lessons to further explore the use of blog in educational settings would definitely enhance the students' introductory experience gained from the current module.

Theme Two
"I tend to self-reflect more than I constructively contribute."

To begin with, out of all the components examined, "*Blogging as a Process of Reflection*" was the only one with inconsistent results. Throughout the module, the students in discussion rarely initiated or participated in responding to comments (even to comments from the teacher). It could be that the students actually knew that the exchange of comments among the teacher and the students would be beneficial for their learning as a whole; however, for certain reasons, the level of reflection by giving and responding to comments was minimal. Among all, time factor was cited as one of the reasons.

In blogging as a process of reflection, the students had to first 'read'. For the record, they generally enjoyed reading blogs and comments. Research has suggested that students like reading blogs due to their "excellent writing" (Kaye, 2004). After that, the students basically need to 'think' and 'respond'. Reading made them think. In terms of 'thinking', the students seemed to think when they blogged, when they read other students' blogs and comments, when they received comments for their blog posts, and when they read the comments which other students received. In short, the students read and think; they were reflective in nature (learning style). Thus, it was discovered that with such cognitive processes, the students did practise quite a lot of self-reflection when learning.

In terms of "responding", as much as the students enjoyed reading blog posts and comments, all of them clearly had little interest in giving comments to what they read and in responding to the comments received. Such a possibility has been reported by Kaye (2005) whereby while some students may be active participants, some may

prefer being passive and aloof, to merely read through the blog posts and/or comments. This behavior was similar to what S2 described of himself, "*I'm more fascinated with blog posts which are like stories ... it's just like reading a storybook ... I just read and absorb everything*". Often, he felt that he had nothing to comment on although he always read with effort.

For students like S1 and S4, they had worries about offending and hurting other students' feelings should their comments be taken too personally, or about displaying to others their own weaknesses, a finding in coherence with the one by Greer and Reed (2008); hence the intention to avoid conflicts by keeping mum (Hutchison & Wei, 2012). Other than that, time was another factor as keeping up with all blog posts and responding to all comments may prove too taxing for students who had other homework commitments.

When asked if making commenting and responding to comments compulsory would have resulted in a difference, S5 answered with a resounding '*yes*'. In this module, almost no requirements were made compulsory as the teacher-researcher did not want to burden the students who were just exposed to blogging in order to elicit from them genuine feedback regarding the use of blog in learning literature. This study has shown that without compulsory requirements from the teacher, the students would most likely continue learning passively; hence the significance of teacher facilitation in guiding student learning when using an instructional technology (Miceli, Murray, & Kennedy, 2010).

Although it was tempting to deduce that assessment needs could have actually ensured a more robust commenting activity among the students, research has also found that students under forced condition would produce inauthentic responses to meet the teacher's minimum requirements (Hutchison & Wei, 2012). Throughout the lesson, the students even when they did respond to comments, have done so only for the comments from the teacher. Somehow, this implied that the students may have done so out of the feeling of obligation toward the teacher. Hence, appropriate motivation and reasonable assessment requirements (Ducate & Lomicka, 2008) deserve careful consideration to encourage students to productively, and not just reactively participate in giving and responding to comments.
It was also found that although the students were not into giving or responding to comments, they liked receiving comments, as an acknowledgement of their performance. The students were eager to know if they performed well or otherwise, and they were aware of this as a way for the exchange of ideas. To them, comments from others could be used to point out mistakes and to enable improvements. Therefore, in a way, the students did not mind receiving comments because they were useful for their self-reflection and self-learning, but they had a lot of room for improvement if they were to reflect and contribute constructively to facilitate other students' learning as well.

Theme Three

"Blogging opens my eyes to learning literature."

In the past, learning literature for the students investigated in this case study had revolved around only reading the text, copying notes or doing exercises. Seldom had they an activity or seldom had they any writing task. Therefore, this module was significant in the sense that the students were exposed to the fact that literature was not supposed to be as boring or as meaningless as implied through their mundane school lessons. One very regretful finding was that the aestheticism of literary appreciation was largely lacking in the students' experience of learning literature. Missing were the "*inner tensions, sensations, feelings, and associations accompanying images*", described by Rosenblatt (1986, p. 124) as "evocation" when the reader corresponded to a text, and the platform for dialogues about readers' "evocation". The students almost never had to voice out their "evocation" when learning literature.

Therefore, the teacher-researcher anticipated that blogging would kick-start the students' experience of making visible their "evocation" by writing about literature. This was true simply because blogging about literature provided students with two critical things: (1) a reason to blog, and (2) an audience to blog for. Blogging facilitated the expression of the students' views and interpretation about the text read. As reading is a transactional process between the reader and the text in a personalized setting (Rosenblatt, 1986), the students were afforded the opportunity to generate in-depth interaction and engagement with the text in order to be able to blog freely and frankly about the meaning created. Through this module, the students learned literature by thinking from the characters' point-of-view and they managed to understand the context of the text from a whole different perspective. They could all basically interact and respond to the text using their creativity and personal feelings.

One interesting finding when examining the way the students interacted and engaged with the text (see the Component Blogging as a Literary Response) was that all the students either agreed or strongly agreed to all the related statements but there were three statements which some students were unsure about: Statement 29 - *"I relate the characters' experience to my personal experience*", Statement 30 - "*I put myself in the characters'* shoes", and

"*I develop a more personal feeling about the story*". The teacher-researcher discovered that the students basically saw little relation between themselves and the text they read, a condition far-fetched from Hiew's (2010) suggestion that students could imagine themselves living in the story. The students mainly thought of the text as a story for leisure reading. They expressed having little similar experience with the characters and/or the story they read, hence the inability to draw personal connectedness with the text. Even when they do, the students only related more personally to the characters they liked.

In a way, this scenario fell short of the aesthetic reading proposed by Rosenblatt in 1986. The students seemed to need more guidance and practice in learning how to read a text with not only an efferent stance (recall of details, paraphrase, summary, categorization of genres, formalistic analysis of verbal techniques, background knowledge, and literary history) but also with an aesthetic stance (the lived-through experience) (Rosenblatt, 1986). The students ought to be exposed further to learning literature with more self-immersion. Nevertheless, this module was a good start as it had brought about improvements in terms of "opening" the students' minds that to understand a text with depth, they have to think from more than one perspective, not only from the author's, in order to really delve into the reading of a literary text.

In addition, the students found that through blogging, they were encouraged to learn independently. They began to take more initiative in order to complete the tasks assigned and they acknowledged that this worked to their advantage. For instance, S2 elaborated,

> "*I needed to read up the short story on my own. I also viewed the stuff posted by the teacher and the other students. I needed to think how I should write for all the given tasks. Now, I can also manage my own blog."*

Having to learn independently and to perform individual blogging tasks was very much welcomed by S3 and S4 who revelled in the freedom to decide the ways to complete the tasks to their liking and where they could work better in solitude. The rest of the students (S1, S2 and S5) thought otherwise. They showed that passive students did not necessarily dislike group work although they may not be as participative as other more active students in the class. Therefore, it was learned that passive students too may prefer occasional discussions and group work mostly because they could learn from a variety of viewpoints in understanding the text.

As literature response journal has been a regular in literature lessons, blogging was in fact an extension of literature response journal where the core activity was none other than writing about literature. The students realized that they could actually write about literature in a journal or on a blog. S2 and S4 preferred to blog about literature while S1 and S5 desired a mix of both ways. It was interesting to find out that the students brought up "handwriting" when they justified the advantages of journal writing. S5 explained:

> *"When I write in journal, I think more carefully because if I write wrongly, I cannot simply delete and retype, so I tend to write more carefully and pay more attention to my language. Indirectly, I get to practise good handwriting too. For blogging, I can improve my spelling through the auto-correct function*."

Most of the students claimed that blogging was much easier than writing in a journal as they were very accustomed to a keyboard, allowing them to type much faster than they write with less fatigue. S3 who disliked writing in general preferred to write in journal presumably because she was still more comfortable writing in a more familiar setting since she did not find WordPress.com to her liking. To her, a different setting to write in (such as a blog site) did not manage to change her existing perception of writing.

All in all, be it in a journal or on a blog, it was important to discover that the students were aware that writing about literature could enhance greatly their learning of literature. The main objective to enhance students' literature response by encouraging a multi-perspective (point-of-view) reading was achieved. By the end of the module, all the students came to the realization that literature is learned in various ways; one of them being blogging. As S4 exclaimed, "*I can learn literature in a new way*". S5 too concluded positively her experience with this module by saying: "*I realized there are plenty of ways to learn literature*".

CONCLUSIONS AND RECOMMENDATIONS

In integrating an instructional technology such as blog into teaching and learning, support is crucial before such a decision is taken (Hourigan & Murray, 2010), and the teacher's role is vital (Miceli et al., 2010). Students ought to be scaffolded with continuous support before, during and even after the module. It was found that students would have had a smoother blogging and learning experience should training sessions have been provided before the module. This ensures that students rather than being bogged down by technological and technical issues, could

embrace the benefits of blogging with minimal restrictions. Also, students should have been briefed about the choice to customize their blog for viewing only by the teacher and other students to overcome privacy concerns.

This study had the aim of exploring student feedback towards an introduction to using blog in their literature lesson and students in general recorded positive feedback toward the module as a whole. Put it simply, the students liked this module (lesson). In summary, this module has come to highlight three important themes:

1) Students acknowledge how blogging can actually enrich their learning. In fact, they enjoy blogging as a learning activity although they may not envision themselves indulging in blogging at least for the time being. This finding proves that a blog as an instructional technology can definitely work well with students (Churchill, 2011), and with proper and careful planning, teachers can help any student to benefit from the use of a blog in learning even under the circumstance that certain students may not fully embrace blogging as an activity; with continuous exposure and support, it is possible for teachers to improve if not alter students' perception towards the incorporation of a new instructional technology in their lessons.
2) The learning culture of our students is still embedded within the listen-and-follow behavior where students dedicatedly complete all assigned tasks but do not actively inquire or constructively contribute to the teaching and learning process. Similar to the findings of Churchill's (2011) study, it was suggested that perhaps it was our culture that our students were "less likely to be open to sharing and criticism than in the West" (p. 154). Blog is a platform for sharing and to display cognitive activity like reflection to encourage constructive criticism; nevertheless students are still wary about such a practice, hence the under-utilization of blog as students unknowingly treat it as only a space for homework-posting. This finding points again towards the passiveness in learning which is in fact a trademark among Malaysian students. Teachers ought to strive to engineer a more conducive and constructive learning environment to cultivate students who excel not only in self-reflecting for their own learning but also in collaborative learning.
3) Students find activity-based lessons interesting and enjoyable in learning literature. Through this module, it was encouraging to witness the realization which the students achieved, that learning literature is so much more than what they have been experiencing in class. In short, blogging can facilitate the teaching and learning of literature besides enhancing students' literature response. This finding is significant in improving teachers' pedagogical and technological knowledge as blog adds to the teaching and learning repertoire for the literature subject. From here, teachers should realize the value of freedom of expression in invoking students' literature response. Furthermore, teachers should react to the urge to proactively incorporate instructional technology into literature lessons simply because literature, if appreciated appropriately, is not at all a "dry", overly-abstract or difficult-to-understand subject.

For teachers, the current module could be used as a template to design complete modules to introduce blogging to students as an alternative to learning literature. Teachers could expand from this introductory module for the purpose of teaching other elements of a literary text, or even for developing a complete module made up of a series of lessons to teach a whole literary text. For researchers, the duration of this module could have been lengthened for future studies. A buffering period would have been necessary for the students to adapt to a different learning condition (blogosphere -- online learning) instead of the traditional face-to-face classroom. Understandably, this would prevent the effects of adapting to new instructional technology from overshadowing the real impact of the innovation.

Before implementing a new module or instructional technology with students, a teacher has to understand their learning difficulties and motivation. In this module, for example, one student disliked writing in general and this indirectly influenced her eventual perception of blogging. In future, the teacher-researcher should introduce appropriate learning activities for students with learning difficulty, and at the same time guide them to overcome the difficulty. This will ensure continual motivation to embrace an innovation and that the student could experience and react genuinely to the innovation without interference. Problems related to student mind set and culture should also be addressed appropriately to realize the full potential of the instructional technology. From this study, it could be observed that our students practise a non-inquiry learning habit. Throughout the module, they were responsible and diligent in completing all the assigned tasks; however rarely had they contributed or reacted to feedback to display reflection in their learning.

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HOW CAN EDUCATION TRANSFORM SOCIETY: THE NIGERIAN PHENOMENON?

Saheed Jabaar
saheedjabaar@gmail.com
FACULTY OF EDUCATION
NORTHWEST UNIVERSITY, KANO, NIGERIA

Abstract:This paper examines the sociological and philosophical issue of the relationship between education and society. It adopts conceptual, analytical and prescriptive methods to identify some weaknesses that need to be overcome in Nigerian education for it to adequately serve as an instrument for national transformation and development as envisaged in the Nigerian National Policy on Education. For any national transformation agenda to work, moral education of the citizens cannot be left to chance. Therefore, an integrative approach to moral education is suggested for formal education levels. This is to be complemented with modeling and behaviourists approach in the larger society. While education may not be expected to transform the society in a drastic manner because it is part and parcel of the society it seeks to transform, all hands must be on deck to reposition it to produce moral human beings who can positively impact on their society

Introduction

Human societies have always had problems and people have always sought solutions to such problems. The education sector has always been one of the first points of call to seek headways to social ills. As such, it has always been the preoccupation of educational thinkers to set goals for education in order to use education to 'create' the kind of human beings required to transform society. It is a trite fact that Nigeria as a country, in spite of her abundant human and material resources, is facing develop-deficit is almost all aspects of her national life. This development deficit manifests in poverty, insecurity, corruption, unemployment, lack of productivity and all forms negative attributes. The country is underachieving and it is not where it is supposed to be in the comity of nations. There is, therefore, the need for national transformation. What is it to transform a society? Who is to undertake this transformation? How realistic are the current efforts to transform the Nigerian society? Why has abundance and preponderance of material resources not profited Nigeria and its people? Why has Nigerian greatness remained at the level of rhetoric? Can education transform a society? If it can, what type of education is required to transform a diverse country like Nigeria? These are some of the questions that would be addressed in this paper. The method that would be adopted will be conceptual, analytic, and prescriptive.

Conceptualizing Transformation

To transform something is to change or alter its form or appearance usually for the better. Transformation can be physical when we talk of changes that can easily be seen and felt. For example, development in infrastructures like transport systems, power supply, housing systems and the like are physical facilities that are sine qua non to healthy living in any society. Physical transformation is dependent on the extent man has been able to manipulate the natural environment and natural resources like coal, forest, and minerals to build houses, factories, and provide infrastructures such as electricity, communication technology that make life better. Transformation can also be biological. Development of organisms from egg stage to maturity involves biochemical processes which lead to the organism being able to perform activities it hitherto not able to perform before the transformation. Transformation is usually associated with positive changes but it can however be negative when what is required to be put into a process to yield the desire result is not put in place in the right quality or quantity.

Individuals are transformed physically through biological processes like nutrition, physical exercises, and their interactions with their environment. However, the most significant way to transform human beings is through education. Education equips its recipients with knowledge with knowledge, understanding and a way of viewing the world which transform them to a state that is better than what they would be without it. Transformation can also be social when talking about the improvements that have taken place in the realm of the way of life of a people, their social etiquettes, their modes of dressing, food types and the like. It is individuals who have been positively transformed who can transform the society. It is from this perspective that it can conveniently be argued that education can transform a society. On the other hand, when one considers the fact that all the players in the education sector are also parts and parcel of the larger society, one can only be cautiously optimistic of using education as an instrument of transforming the larger society. If the larger society is corrupt, it is very unlikely that the education sector will be very different from the larger society.

Transformation is a constant process. Nothing is static; everything is constantly changing either for better or for worse. As such, a society cannot be static. That Nigerians are always quick to remember with nostalgia the good old days in terms of the economy, education, and social relationships is a pointer to the fact that there has been a transformation in the negative sense in the Nigerian society. It is like a cell being infected by a cancer – causing virus thereby making it to undergo a change for the worse in terms of health and well-being. This cancer

causing virus in the case of Nigerian society is corruption of people's moral. There is a compelling need to halt this moral degeneration before any other effort towards national transformation can be worthwhile.

Efforts towards transformation of the Nigerian society

On paper, the present administration in Nigeria has laid out a transformation agenda launched in the year 2011 with a view to delivering projects and programmes to make life better for Nigerians. The agenda aims at sound economic management, provision of infrastructure, diversification of the economy, blocking of loopholes in the system and increasing non-oil revenues. The administration also floats the SURE- P programme to provide mass transport, to construct and maintain roads and to provide employment for Nigerian youths. But how far have these lofty ideas translated to better life for Nigerians? One does not need extra - ordinary intelligence to know that life is not rosy for Nigerians and the country is suffering from acute development deficit. According to World Bank President, Jim Yong Kim at the IMF/World Bank Spring meeting and as reported by Omoh Gabriel, Nigeria is one of the top five countries that have the largest number of poor people in the world. Nigeria ranked third in the world while India ranked number one with 33 percent of the world poor, China is ranked second with 13 percent of the world poor followed by Nigeria where seven percent of the world poor people live. According to 2014 report of Legatum Institute, a UK based research organization that documents annual prosperity indicators around the world, Nigeria despite its ₦510 billion economy failed to make the list of Africa's top 10 most prosperous countries. Nigeria was said to have fallen to 27 in Africa in 2014, nose-diving 22 places from its ranking in 2011. This state of affairs can hardly be attributed to death of resources or absence of policy but it has to do with mismanagement of the nation's resources by the leaders and lethargy on the part of the led to hold leaders accountable. It ultimately boils down to low moral quality of the citizens.

The above is a pointer to the fact that the transformation agenda of the government still remains at the level of wishes and if wishes were horses, beggars will ride. Why is the government finding it so difficult to implement its lofty policies? Why is it that ideas that worked elsewhere often fail in Nigeria? The simple fact is that the moral quality of both the leaders and the led is very low. The pervasively corrupt social environment constitutes a stumbling block to prosperity and wellbeing of the land and its people. In situations like this, it is logical to look in the direction of education to re orientate the people and inculcate in them values that are required to enable them become the sort of human beings who can positively transform the society. If it is true that the education sector is responsible for the manpower production of any nation, education cannot be totally exonerated when there is moral laxity in the society. Accepted that there are other social institutions like the family and religions which are charged or expected to serve as guides to human conduct in a society, education has a key role to play because every society relies on education for its renewal and rejuvenation. Educational institutions are meant to be avenues where worthwhile habits and values required to live responsibly are reinforced with a greater level of systematization. The Nigerian government, like many other governments in the world, therefore has adopted education as an instrument for effective national development and has stipulated that education shall continue to be highly rated in national development plans (National Policy Education:2004). It is also stipulated in the (NPE) that the quality of instruction at all levels should be oriented towards inculcating values and spiritual principles in inter – personal and human relations. There is the need to go beyond this rhetoric by taking concrete steps towards making education an instrument of transforming Nigerians to 'adequate' human beings who subscribe to higher values of honesty, integrity, responsibility, patriotism and therefore can impact on their society positively.

Since humans are required to implement any policy, nothing concrete can be achieved until conscious efforts are made to educate Nigerians, both young and old, morally. Although the government and the people of Nigeria recognizes the significance of moral education of the citizens and players in the education industry are often tasked and constantly being reminded of halting the current deterioration of moral values, nothing concrete is on ground to put forth a coherent moral education in the country apart from the statement made in the national policy on education. Moral education cannot be left to chance as it is being done at the moment without grave consequences. Before Nigeria can be transformed, Nigerians must first be transformed through sound education from being self-centered to being public - spirited, from being cruel to being kind and considerate to one another.

What is it to be moral?

According to Stanford Encyclopedia of Philosophy, the term moral is an adjective used to describe something which is concerned with the principles of right or wrong conduct or behaviour. The word moral is the root word from which morality is derived. Morality itself is derived from the Latin word moralitas which means manner, character, proper behaviour and the like. Hence, to be moral is to adhere to the principles of good behaviour. It is to be of good conduct. As observed by Omoregie, moral issues are related to man by virtue of his rational and social nature. The social nature of man necessitates the desire to live and interact with other people. Man needs others and can hardly live totally independently of other human beings as he needs others to overcome and make up for his weaknesses. It is on this basis that society is formed. Societies are formed in order to overcome individual inabilities and enhance ability to achieve common goals (Ekanola: 1999).

This interdependence calls for interaction and social relationships. There is therefore, the need to device social mechanisms that can promote harmonious social relationship among members of a society. The principles

that guide human relationships and that helps to facilitate peaceful and harmonious relationships among men in society is called morality.

The rational nature of man makes him accountable and culpable for his actions. A lunatic, for example, would not be culpable because he has lost rationality which makes him to be human. Hence, both social and rational nature of man makes him a moral being, a being that can be held accountable for his actions. An issue or action becomes a moral one when its consequences or outcome imparts on the lives of others in society. For example, a man's choice of breakfast menu would not constitute a moral problem but whether he or she performs his or her duty as a school teacher or not would be a moral issue because the options that are open to him or her will invariably touch the lives of other people. The social and rational nature of man enable him to understand that life is best lived in a community, and a community life is peaceful and harmonious when its members respect the life and interest of others, when they keep agreements and when they are kind and not cruel to one another.

A moral person, therefore, would be one who holds and exhibits high and strong principles for proper conduct. He or she works with others to ensure peace and development of his society. He abstains from anything that can create social problems and or serve as impediment for societal development. Hence, a society would only develop when a considerable number of its members are moral and hold strong moral principles. It is, therefore, expedient that societies have a plan for moral education of their citizens. It is perhaps from this perspective that Malaysian government launched the National Integrity Plan in the year 2004 with a view to promoting the virtue of integrity so that it becomes the norm culture of their society. This effort seems to be worthwhile considering the successes being recorded by Malaysia in all fields of human endeavour in recent times.

How can we do moral education?

As shown above, before Nigeria can be transformed in the real sense of the word, conscious efforts need to be made towards moral education of the citizens. Moral education is a process of helping an individual to have a proper sense of what is right and what is wrong is social relationships. It is the process of developing in people, disposition to do what is right. In Aristotle's view, ethics should not be concerned with mere abstract knowledge but about the ability of individuals to choose to do what is right because they possess the character which makes them to be disposed to act rightly in any given situations. Aristotle further contends that moral education is supposed to be the primary purpose of the political community. Governments at all level should have programme geared towards uplift of the moral consciousness of their people and developing their sense of moral responsibility. This can take forms such as:

Formal approach
Informal approach
Non-formal approach

Formal Approach

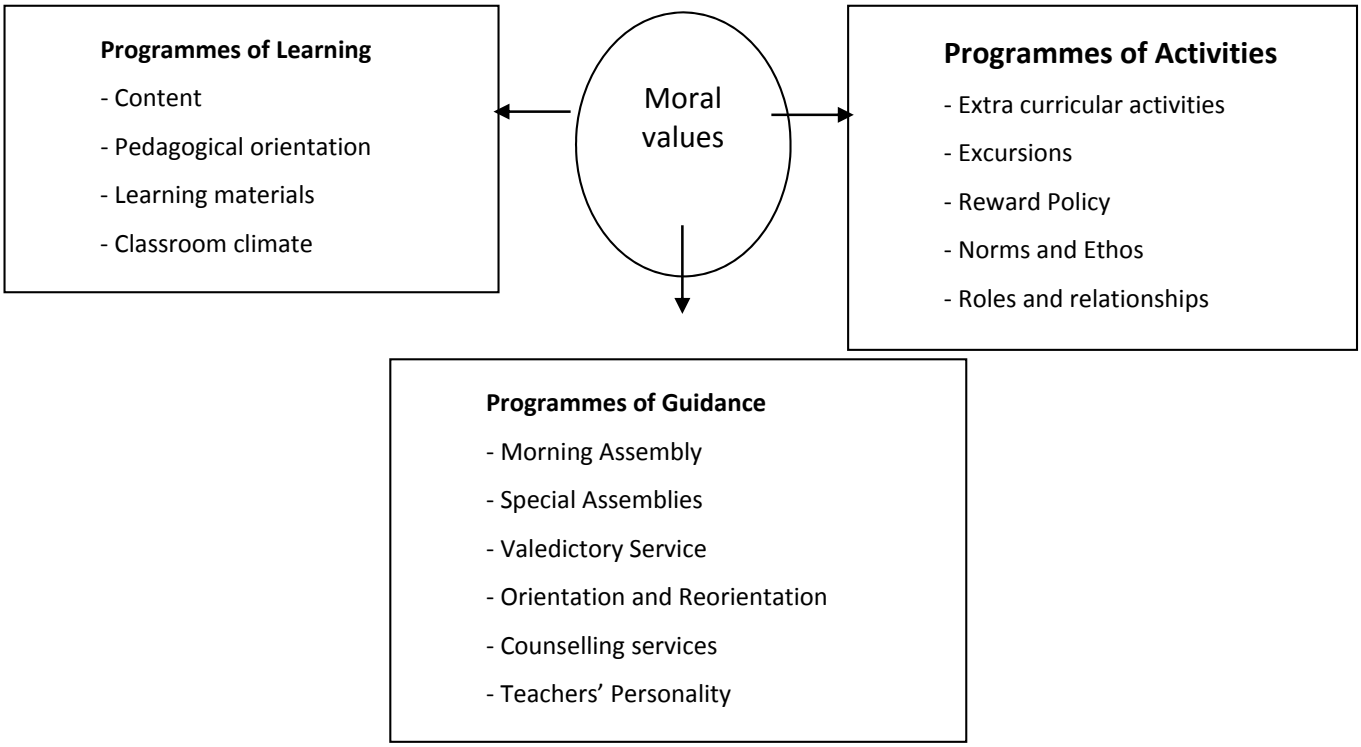
This is usually done is formal school setting at primary, secondary and tertiary levels. Moral education can be done formally in many ways. It can be through religious approach whereby major religions are taught as subjects in schools. This is the most common approach in many societies, Nigeria inclusive. Some contend that to raise the moral life a people, we should teach them religion more than we are doing now. Religious practices and teachings have, however, not proved to the effective in raising the moral consciousness of the people especially in the Nigerian situation. The fact that it is not all that is religious that is moral, can make engagement in immoral acts such as favouritism, nepotism, embezzlement, hatred and the like to be justified on religious and ethnic grounds.

Aside, the multi-religious nature of the country makes it problematic to accommodate all religious in schools. As such, some religions are invariably being marginalized and so their adherents not carried along effectively and sometimes lead to crisis in schools. Therefore, religious approaches have not been efficacious in improving the moral life of Nigerians. As observed by Oluponna, conversion of Nigerians to Christianity and Islam and an increase in public professions of spirituality seem not to have succeeded in structuring public life and citizens' obligations to their community. Hence, there is the need to find a more all inclusive approaches to educate not only the youths but the entire populace in morality. Moral education in the real sense of the word should appeal to man's social and rational nature. It should rely on rationality as the basis of its validity and this is major difference between religion and morality.

Moral education can also be done in schools by teaching specific values and virtues as topics in a moral education class. For example, honesty, integrity, patriotism, responsibility and the like can be taught as topics in civic education or moral education. For this method to work effectively there is need to adequately prepare teachers to teach the subject. One weakness of this approach is the danger of teaching these values as absolutes without considering situations when any of these values can be held by another value. For example, a value like honesty can be held by another value like compassion to save the life of an innocent. In such an instance or context, honesty may not be a virtue. Moral education should therefore be able reasoning about the right course of action in specific situations and being a sort of person who is of worthy character.

Another method of moral education through formal approach is value clarification. This involves raising moral issues and discussing real or hypothetical cases on which learners are allowed to freely make contributions. The teacher uses learners responses to know their level of moral development and then help them to develop to the next higher level. Values clarification has the strength of not teaching any particular values as absolutes but it needs to provide the learners a moral compass for it to be effective. In other words, it should lead to learners realizing what is right from what is wrong.

This writer would advocate an integrative approach to moral education. It involves integration of moral values to the entire components of the school curriculum, that is, programmes of learning, programmers of activities and programmers of guidance. This is illustrated in the figure below.



As regards programmes of learning, schools subjects can be used to foster moral growth of learners when teachers bring out the moral dimension of their subjects. All school subjects can be used to achieve this when appropriate methods are used. The moral dimension refers to the implication of what is being taught in natural sciences, social sciences, and arts for the wellbeing of humanity. Apart from the cognitive significance of school subjects, teachers should always bear in mind that it should also inculcated in the learners some basic social skills. These subjects should be taught to foster intelligent and humane behaviour in learners. Teachers need not stop at the cognitive level but should use their subjects to touch learners' affective life. However, for this approach to be effective, teachers need to be properly trained and retrained to discharge the responsibility.

Programmers of activities and programmes of guidance are usually outside the scope of programme of learning. They are also called the hidden curriculum. They are veritable avenues towards dealing with issues that have to do with attitudes, values, beliefs and behaviour. The various activities that take place within the school and how the school is administered can send strong moral signals to the learners. For example, faithfulness to the school time scheduling of activities can send strong moral message to the learners. A school where the school time-table is flouted at will or where teachers come for their classes late or stay longer than necessary is not likely to produce individuals who would have strong sense of commitment to rules and order.

Informal Approach

To transform a society, all including the young and the old must be transformed. Therefore, moral education should not be left to formal school system. As such, the media, political leadership and all the institutions of society must work together to effect the positive transformation. Informal approach to moral education of citizen would take the forms of:

- Modeling
- Behaviorists approach

Modeling is a setting good exemplary example by leaders at all levels. Nigerian leaders have failed to positively transform Nigeria because they have failed to lead by example. Leadership here is not all about the political leaders but also leaders at all level: parents, vice chancellors, rectors, provosts, principals, headmasters, chief executive officers, head of departments, captains of industries and the like. The way to get out of our present predicament is to make sure that only creditable and competent individuals who have what it takes to lead emerge as leaders at all levels. To borrow Achebe's words in his "Trouble with Nigeria", ''Nigerians are what they are only because their leaders are not what they should be''.

A good instance of a leader who drastically transformed his nation is Lee Kaun Yew, the Prime Minister of Singapore between 1959 and 1990. He amazingly led the transformation of the country from a third world country to a first world country within three and half decades. He gave an account of the transformation in his book "From Third World to First: The Singapore Story". As a prelude to a dramatic effort towards greening and beautification of Singapore, he first worked on the attitude and behaviour of his people. He rid them of negative attitudes of littering, noise nuisance, rudeness and he got them, through exemplary leadership, into being considerate and courteous. This shows that transformation of a nation does not start with physical transformation but with transforming people's habits, attitudes and behaviours. Today, Singapore does not only have world class infrastructure, but also a people who uphold high moral standards.

Another important way to informally impact the psyche of the masses is the behaviourist approach of creating a conducive environment for people to behave morally. Behaviorism is based on the notion that behaviours are acquired through conditioning and conditioning occurs through interaction with the environment. In other words, our responses to our social environment shape our behaviour. Most Nigerians are corrupt because it is possible to be corrupt and not be caught and if caught, one can get away with it especially those who have the patronage of and connections with powers that be. When the rule of law prevails and institutions of society are working, offenders are apprehended and punished adequately according to the law, then the masses sense of right and wrong (morality) would be enhanced and there would be less incidences of immoral activities. Nigerians are not more corrupt or criminal - minded than other human beings in other parts of the globe. The present moral decadence is a function of the kind of social environment the citizens create for themselves through their acts of commission and omission. Most humans remain at the conventional level of moral development at which they define morality as acting in accordance with what society defines as right. A society defines an action as appropriate when it reinforces by reward and defines other actions as inappropriate when it sanctions the doer of the action. This plays a critical role in moral development of the people whether young or old. Until our laws are judiciously enforced and culprit punished, corruption and other criminal action will continue to reign and transforming Nigeria will remain a dream.

Non - Formal approaches to moral education can include organisation of workshops, conferences, seminars, staff development programmes to enlighten members of the public on the dangers and grave consequences of immoral behaviours on the society. This should not only to be done by the government but also by civil societies. Adult education should not just teach literacy skills but serve as an avenue for value re - orientation of the masses.

Conclusion

Transformation of Nigeria will continue to be a mirage until conscious efforts are made towards moral education of the citizens. This can be done formally through moral education in institutions of learning and informally through modeling, good leadership and creating conducive social environment for citizen's moral growth. Non - formal approaches should also be used to disseminate useful information to the public on the need to live a moral life. This would be a more holistic and all inclusive way towards halting the current moral degeneration in the land. It is, however, logical to be cautiously optimistic about the potency of education especially formal education to drastically transform the society, because it is part and parcel of the society. But all hand must be on deck to ensure that it is positioned properly to produce adequate human beings for other sectors of the economy for any national transformation agenda can be successful.

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INFLUENCE OF SELECTED DEMOGRAPHIC FACTOR ON MATHEMATICAL CONCEPT ERROR

Mrs. R.D.PADMAVATHY
Assistant Professor (Mathematics)
Department of Education, Tezpur University (A Central University), Assam, India
padmajothi@yahoo.in

Abstract:The aim of this paper is to exhibit the mathematical difficulties and concept error committed by students while solving the mathematical problems, which are not sufficiently known, recognize or aware by the teachers. In this present study Mathematics Diagnostic cum Achievement Test (MDAT) constructed by investigator was used to collect the data from a sample of 900 class nine students belonging to eighteen English medium coeducation schools in union territory of Puducherry. Proportionate stratified random sampling technique was employed. Chi- square and Cramer's V contingency coefficient had been calculated. The findings of the study show that there exist a remarkable association between the extent of concept error and the selected demographic factors.

Introduction

Mathematics is the significant subject helpful for developing human thinking in a creative way to face the real world and a science of logical reasoning. Realising the importance of Zakhir Husain committee (1937) saw mathematics in relation to work, Kothari Education Commission (1964-66) remarked that Science and Mathematics should be taught on a compulsory basis to all pupils as a part of general education during the first ten years of schooling. In addition, there should be provisions of special courses in these subjects at the secondary stage, for students of more than average ability. National policy on education (1986) also visualized it as a "vehicle to train a child to think, reason, analyse, and articulate logically. Apart from being a specific subject it should be treated as a concomitant to any subject involving analysis and meaning". National curriculum framework (2005) remarked "succeeding or access to quality mathematics education should be seen as the right of every child. The teaching of mathematics should enhance the child's resources to think and reason, to visualize and handle abstractions, to formulate and solve problems". But in India (after completion of six seven years independence also) the shape of mathematics education still persistent in the same stage and the student's experience of difficulties, anxiety, failure and burdensome are increasing day by day which also produces mathematically disabled learners.

Need for the study

Mathematics is not just the subject of memorizing few formulas and using them to solve problems. Even formulas have restrictions on them itself; it has to be used in the correct place of correct order. Mathematics learning is a continuous process of learning which needs to get the principle and concepts behind it. Without understanding the concept it is not possible to become a good mathematics learner. To produce a good mathematics learner is the aim of every mathematics teachers. Teacher's knowledge about student's concept error and mistakes act as one of the barrier to achieve their goals. Teachers generally do not take the issue of reducing errors committed by students as a challenge. Instead they accept that errors are natural phenomena which occurs inspite of their presumed good teaching. They do not explore the deep rooted causes and at best manner indulge generally in reteaching.

In learning mathematics the issues of student's difficulties exhibited in their performance and type of errors have not been addressed squarely by teachers in terms of what errors and why such errors are committed and what are the responsible factors. In the same way researcher who lists the errors do not provide the responsible factors and why such errors committed. If the empirical support in identifying associate or related responsible factor for making such errors are always limited if such related factors for each type of error commonly performed by the students are identified it may through some light on either for remediating such errors in career guidance. Hence this study focuses on understanding the student's characteristics related to performing concept error and the responsible selected demographic factor namely gender, place of residence, parental qualification, and type of school management at high school level.

Concept Error in Mathematics

Hendrik Radatz (1979) classified errors based on the information processed by the learners. This provided a cognitive model of the causes of errors and suits for all the branches of mathematics. His categories are:

1. Errors due to deficient mastery of prerequisite skills, facts, and concepts- Engel Hardt(1977); Sharma (1988), Chuaboon Liang and Eric Wood (2005) also identified this error.
2. Errors due to incorrect associations or rigidity of thinking,
3. Errors due to the application of irrelevant rules or strategies

4. Errors due to difficulties in obtaining spatial information
5. Errors due to language difficulties**.**

The first category of Radatz (1979) classification 'Errors due to deficient mastery of prerequisite skills, facts, and concepts' treated as a concept error in this study and the responsible demographic factors were analysed.

Concept Errors are happen due to poor mastery of basic facts, concepts, and requirement skill in mathematics. This error includes the lacking of mastery of basic facts, erroneous procedures in applying mathematical procedure, ignorance of algorithms, and inadequate knowledge of necessary concepts and symbols. This type of mathematical errors makes the students to deviate from the mathematics major and act as a disease which makes our students learning disabled.

Sample for the Study

A sample of 900 students selected from the eighteen different types of management schools, included 439 boys and 461 girls from urban and rural schools of Puducherry.

Tools Used in the Study

The following tools were used in the study

i. Information Schedule
ii. Mathematics Diagnostic cum Achievement Test (MDAT) constructed by Investigator.

Mathematics Diagnostic cum Achievement Test

Mathematics Diagnostic cum Achievement Test has 150 test items from different branches namely, algebra, geometry, Mensuration, trigonometry, statistics and probability. It is a multiple choice test with four alternative responses chosen by the learners out of four multiple choices one of the alternatives must kept correct. The remaining three alternative distracters were wrong responses. But each of the three wrong responses was designed in such a way to identify different level of thinking which matches three surface levels of SOLO taxonomy.

Objectives of the study

- To identify the concept errors in mathematics committed by IX standard students.
- To find out the association between the extent of concept error and the following demographic factors
  (i) Gender (ii) Place of Residence
  (iii) Parental Qualification (iv) Type of School Management

Hypothesis of the study

- There is no association between gender and proportions of students classified according to different extent of concept error committed by them.
- There is no association between place of residence and proportions of students classified according to different extent of concept error committed by them.
- There is no association between parental qualification and proportions of students classified according to different extent of concept error committed by them.
- There is no association between type of school management and proportions of students classified according to different extent of concept error committed by them.

Statistical Technique Used

To study the association between Concept error and demographic variable - Chi- square and Cramer's V contingency coefficient had been calculated.

Data Analysis for the study

Data analysis for the study was done as per the objectives of the study. The responses of each student were analysed to determine how many times each of the concept error are committed. Quartiles were calculated for concept error based on the quartiles the students were divided into three groups. The students who did not commit any error in any one place he/she was identified as 'Non Error Doers' in that error type. Based on the frequencies of errors committed by students error doers in each type separate frequency distribution were made for all the 900 students taken together. There were four groups of error doer's classified on concept errors. Frequency and percentages of students committing concept error where classified according to gender, place of residence, type of school management and parental qualification were calculated. The frequency, percentage and pie chart of Quantum of Concept Error groups, the result of Chi-Square for association between concept error and demographic factors is given in Table 1 and Table 2.

Table 1: Quantum of Concept Error Groups with Non Error Doers

Level of Concept Error Doers	Frequency	Percent
High Error Doers(HED)	199	22.1
Average Error Doers(AED)	493	54.8
Low Error Doers(LED)	53	5.9
Non Error Doers(NED)	155	17.2

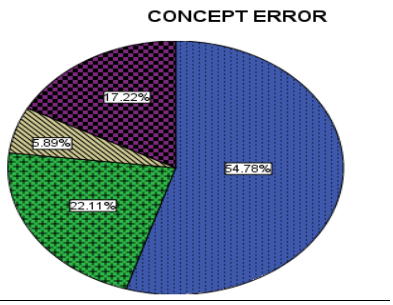

Table 2: Result of Chi-Square Test for association between Gender, place of residence, type of school management and parental qualification and Proportions of Students Classified according to Different Extent of Concept Error

Demographic Factors		Extent of Concept Error				Chi Square Value	Asymp. 2-Sig.
		HED	AED	LED	NED		
Gender	Male	89	254	26	70	3.607 (3)	0.307
	Female	110	239	27	85		
Place of Residence	Urban	105	229	22	94	11.64 (3)	0.009
	Rural	94	264	31	61		
Type of School Management	Govern	69	146	32	53	10.89 (6)	0.283
	Aided	62	168	16	54		
	Private	68	179	5	48		
Parental Qualifications	Illiterate	25	69	11	23	25.13 (9)	0.000
	Below X	88	203	24	65		
	Above X	67	139	14	45		
	College	19	82	4	22		

Findings of the study

From the above Table 1, it is evident that 155 students out of 900 (17.2%) students have not committed any concept error and the remaining 82.8 % of students have committed concept error. It is found that 493 (55%) out of 900 students who committed this error belong 'average error doers'. That is these students have committed this type of error in different branches of mathematics namely, Algebra, Geometry, Mensuration, Trigonometry, Statistics and Probability, not less than 31 and not more than 56 out of 90 chances. Similarly, 199 (22.1%) out of 900 students who committed this error belong 'high error doers' not less than 57 out of 90 chances. Only 53 students out of 900(5.9%) were 'low error doers' less than 30 out of 90 chances.

Concept error was committed by 82.8% of students

- Among them 41% were males and 41.8% were female students. Female students committed less number of errors than male students. Female students committed low and high concept error more than males. But male students committed average concept error more than females.
- Among them 41% were urban and 41.8% were rural students. High percentage of Non- error doers were urban students. Urban students committed less number of concept error than rural students. Rural students committed low concept error and average concept error more than urban students. But, urban students committed high concept error more than rural students
- Among them 27.5% were government school, 37.4 % were aided, and 27.1% were private schools students. High percentage of Non- error doers were aided school students. Government school students committed both low and high concept error more than aided and private school students. Private school students committed average concept error more than government and aided school students.
- Among them 11.7% student's parents were illiterate, 35.1 % were below X standard, 24.4% were above X standard and 11.6% were completed their college education. High percentage of Non- error doers parents were qualified below X standard. Student's parental qualification below X standard committed concept error less than other three categories namely student's parental qualification was illiterate, above X standard, college education.
- From the above Table, it is revealed that obtained Chi-Square value 3.607 for df 3 is not significant at 0.05 level. Hence, there is no association between gender and the proportions of students classified among different

extent of concept error committed by them. Thus gender and extent of concept error committed by students are not associated.

- From Table 2, the obtained Chi-Square value 11.64 for df 3 is significant at 0.05 level. Hence, there is an association between place of residence and the proportions of students classified among different extent of concept error committed by them. The Cramer's value 0.063 reveals that there is a moderate relationship between place of residence and the different proportions of concept error committed by students. Thus place of residence and extent of concept error committed by students are associated.
- From Table 2, it is revealed that obtained Chi-Square value 10.89 for df 6 is not significant at 0.05 level. Hence, there is no association between type of school management and the proportions of students classified among different extent of concept error committed by them. Thus type of school management and extent of concept error committed by students are not associated.
- From Table 2, it is revealed that obtained Chi-Square value 25.13 for df 9 is significant at 0.05 level. Hence, there is an association between parental qualification and the proportions of students classified among different extent of concept error committed by them. The Cramer's value 0.064 reveals that there is a weak relationship between parental qualification and the different proportions of concept error committed by students. Thus parental qualification and extent of concept error committed by students are associated.
- This study found that there is no influence of the gender, type of school management on concept error and clearly showed that a student who commits high concept error are female, urban and government students, and also it shows there exists a weak relationship with parental qualification and mathematical concept error.

Conclusion

One or the other way mathematics teacher was blamed for the student's failure in mathematics. Freudenthal (1989) believes that "students who make errors always do so with the teacher who teaches them; at least partially the error's role is connected with the teachers' role in the learning process." Similarly, according to Booker (1989, 101) "the origins of many errors are rooted not so much in students but in the manner children are introduced to mathematics". So mathematics teacher should under stand the concept error and the responsible demographic factor to provide explanation to mathematical concept and ensure that students understand the concept as taught. Students level of learning and styles are different, so mathematical activities should be employed to promote their level of understanding. Mathematics teacher should use mathematical terms and language to improve students understanding and the symbols should be fixed in the minds of learners.

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Learning and Experiences: A Step model

Dr.Jagannath K Dange
Assistant professor
P.G. Department of Education, Kuvempuy Univeristy
Shankaraghatta. Shimoga, Karnataka state , India.
jkdange@gmail.com

Abstract: Education is a lifelong process, which we get through learning either intentional or unintentional from Experiences and Experience leads to Learning and learning in turn leads to Education. Experience is the accumulation of knowledge or skill that results from direct participation in events or activities; the content of direct observation or participation in an event; something personally lived through or encountered. The practical wisdom gained from what one has observed, encountered, or undergone or felt. The present paper describes the newly developed step learning experiences model which comprises seventeen different learning experiences listed based on their abstract-concrete continuum. The different learning experiences in the step model can be chosen by the teachers wisely for their teaching-learning process by considering the content, level of students, environment, difficulty level of the content and objectives to be achieved.
Key words: *Teaching-learning, Experiences, Education.*

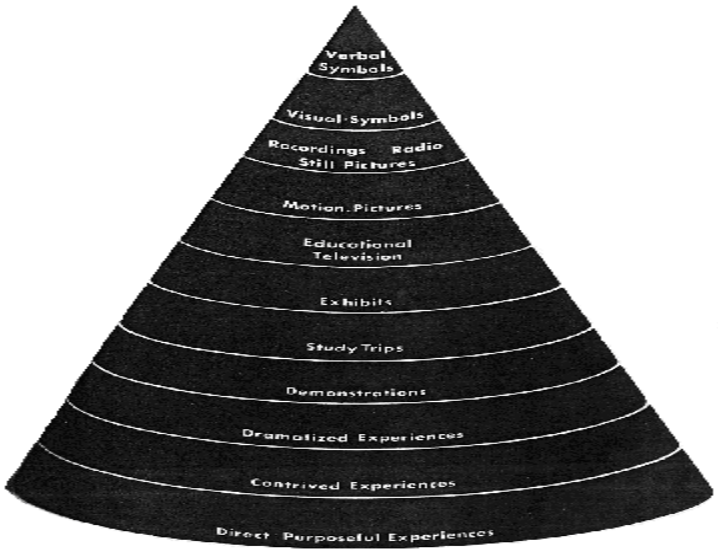
The Importance of Education as highlighted by Roussou "We are all brought into the world feeble and weak, yet we stand in need of strength; we are destitute of everything, yet we want assistance; we are senseless and stupid, yet we have occasion for judgment. All that we have not at our birth, and that we stand in need of at the years of maturity, the gift of Education".

Buddha told that not to accept anything out of authority, not to accept anything because it happens to be written down; not to accept out of reverence for their teacher or because it sounds reasonable. But to verify, test what they have heard in the light of in their own experience. Dange (2014) defines that "Education is a lifelong process, which we get through learning either intentional or unintentional from Experiences" and "Experience leads to Learning and learning in turn leads to Education (P-4)".

Education is formation, recapitulation; retrospection and reconstruction. These are all continuous processes of education and only be provided with the help of *experience*. Different experiences are planned and adopted to educate and train the learners at different levels of education system. It can be observed in the teaching-learning process that, instructors were highly dependent on verbalism to educate pupils. Today's strong and insistent call for relevant, meaningful education is quite familiar to specialists in educational communications and technology. To consider the names of Erasmus, Comenius, Rousseau, Dickens, Dewey and others, all of whom were sharply critical of the meaningless verbalism of our schools and colleges.

As rightly suggested by James Q Knowlton regarding the consideration of materials and methods of instruction, another important component which can be added for the process of instruction is Experience. Experience is the accumulation of knowledge or skill that results from direct participation in events or activities; the content of direct observation or participation in an event; something personally lived through or encountered. The practical wisdom gained from what one has observed, encountered, or undergone or felt.

Experiences may be direct or indirect and of concrete and abstract can be summarized in pictorial device (P-37.Dale 1949). The cone of experience given by Edgar dale has rightly said that it is not offered as a perfect or mechanically flaw less picture to be taken with absolute literalness in its simplified form. It is merely a visual aid to explain the interrelationships of various types of audiovisual materials, as well as their individual positions in learning process.



Edgar Dale's Cone of Experience 1969

In true sense the bands of the (Edgar Dale's) cone are not only the types of audiovisual materials but the different experiences are also included. In fact the upper four bands like verbal symbols, visual symbols, Radio, Recordings, and still pictures, and motion pictures are more related with Audiovisual materials but the later six bands of the cone like Exhibits, Field Trips, Demonstrations, Dramatic Participation, are the strategies of teaching-learning. Contrived Experiences and Direct, Purposeful Experiences are related with term Experiences where a teacher can use them in the teaching learning process. As we study the cone, we recognize that each division represents a stage between two extremes-direct experience and pure abstraction. As we move from base of the cone to the up in order of decreasing directness. Similarly, if we move down from pinnacle of the cone in the order of the decreasing abstraction. As per the Dale's Cone we find Ten bands of experience and audiovisual materials and which has not covered all experiences and even all audio visual devices. The third version of the Book *Audio-visual methods in teaching* released in 1969 and the audiovisual materials used in teaching till that time have been included. But the growth of Information and the communication technology leads the innovation of many more devices which are part of teaching-learning process and the new experiences are also generated with the help of those devices.

Dale has listed the Audio-visual methods which were present or developed at that time many more hardware and software methods have been developed after that after that. So it is essential to add more experiences and make a new model which may be useful for the teachers-students to adopt and even researchers to carry out the research work.

Based on experience of teaching at different levels it was felt that, there are many experiences and audiovisual materials which are missing in dale's cone and to be included by making a new model of experiences which is presented in the following Step Learning Experiences model.

The different learning experiences are presented in the following step model form. The base of the step learning experiences model is direct and purposeful experience which is always preferable for any new learner and any kind of learning concept and gives firsthand experience in turn leads to the permanent learning(Expected). At the top of the cone is verbal or text these are the least effective ways to introduce new content to students. The step learning experience model includes 17 different experiences.

Verbal Symbols: The very first stage of Step Learning Experiences Model is Verbal symbols; Verbal symbols are the designations that have no resemblance to the object or ideas for which they stand. All appearances have been removed from the original. The word Cow does not look like a cow or sound like a cow or feel like a cow. At the top of the Step Learning Experiences

Model we find the things in terms of words which are abstracted everything from the original except the meaning of the term, and on this meaning everyone has reached more or less common agreement.

Verbal symbols are words, sentences, sounds, or other utterances that are said aloud in order to convey some meaning. The verbal symbol may be a word (Cow), an idea (beauty), concept (tragedy), a scientific principle (Theory of relativity), a formula (H2 So4), a philosophic aphorism (Honesty is the best policy) or any other representation of experience that has been classified in some verbal symbolism.

Olfactory Experience: It is also called Aroma Experience; Aroma is a quality that can be perceived by the olfactory sense. It is a type of Experience where the learner can have the concrete idea of the abstract thing through the sense of smell. We can have the smell of substance that may be present in different forms (may be in Solid, liquid or Gas). It is one time learning process or permanent learning takes place and does not require to any rehearsals. Students involve their nose to distinguish specific elements.

Odours are abstract things as verbal symbols and which have no resemblance to the ideas for which they stand. We see that accounts of representational content cannot always be based on the visual model.

Gustatory Experience: Gustatory is an adjective that refers to tasting or the sense of taste, Gustatory has its roots in the Latin Gustare, meaning "to taste,"

It is a type of Experience where the learner can have the concrete idea of the thing or object or concept through the sense of taste. We can have the taste of real thing which may be in different forms (different Size, shape,

colour). It is one time learning process or permanent learning takes place and does not require to any rehearsals. Students study best by tasting the item under investigation.

Tactile-kinesthetic Experience: It is a type of Experience where the learner can have the idea or the concept of the thing or object through the sense of touch and feel; it is learning through a hands-on approach and learners will be physically involved.

Kinesthetic Learning Experience refers to one of the modalities that learners use in order to approach and absorb new information. Every individual student has his or her own preferred learning style, and many people (children and adults) learn best when they are allowed to touch and physically manipulate tools that model or represent the lesson at hand. Kinesthetic learners assimilate new knowledge more efficiently through physical work (playing with manipulative, building dioramas, working with scale models, or role-playing a situation) as opposed to simply hearing or seeing a lesson.

Kinesthetic-tactile refers to a pupil who learns by movement and by touching. This type of experience can be given through hands-on activities, manipulating objects or flash cards, working problems or re-typing notes.

Visual symbols: Visual symbol may be a picture or shape that has a particular meaning or represents a particular process or idea. Something visible that by association or convention represents something else that is invisible; and something that represents or stands for something else, usually by association or used to represent something abstract.

Visual experience has a rich predictive structure. Consider the visual experience you have when you look at a ripe orange. When you look at the orange, it appears that there is an object-namely, the orange-and that it has certain properties-orange coloured, roundness and so on. Visual experiences can also present multiple objects. Visual symbols have no realistic picture of the thing itself but an abstract representation with charts, graphs and maps. We no longer deal with literal reality but with substitution, but communicate messages by means of new language-visual symbols.

Still Pictures, Radio, Recordings: This stage includes number of devices that might be classified roughly as "one-dimensional aids" because they use only one sense organ that is either eye (seeing) or ear (hearing). All these materials are less direct than the audio-visual experiences.

Filmstrips, visual projectors like slide projector, Overhead Projector, iPods, glass slide and photographs, Radio, Tape recorder or recordings are one dimensional aids with similar differences as to imposed or free sequence.

Motion pictures, Television and computers: The motion picture and television experience, unlike the field trip, unfolds with a compression of time and space. Both these can eliminate the unnecessary and unimportant material and concentrate upon only selected points. The important processes can be watched with slow motion and vital content and issues can be repeated number of times. The pupils are mere spectators and are distant from the experiences like touching, tasting, handling and feeling from directly experiencing. We are no longer participants in the event.

The present day computers are not only compact, extremely powerful and versatile, commonly accessible and easy to use. The computer has, indeed become an integral part of our teaching process and daily life. The computer generated graphics enhanced students' learning and the scientific concept could be explained much more quickly using Computer Assisted Instruction (McMahon, 1995). CAI is now being used to replace traditional laboratories. In on-line chemistry programs where the teacher enters instructions and the program changes accordingly. Students then simulate the entire lab experience using the CAI, which saves time, resources and is safer than the traditional laboratory. CAI is now being used in place of biology labs where students can visualize dissected frogs and label the internal organs using the computer.

Television: Little or no use is being made of commercial television in the education of culturally disadvantaged children even though Indian television usage statistics shows that 90% of all homes have at least one set. Here, obviously, it is a potential channel to poverty stricken homes, a channel which is not being effectively utilized. Television's influence on language habits, vocabulary, consumer patterns, cultural values and behavior patterns should not be underestimated. Research suggests that even the learning pace can be enhanced or improved through television learning.

Exhibits: In education normally the arranged working models exhibited in a meaningful way. Sometimes they may be series of photographs or of photographs mixed with models and charts. Sometimes it includes the demonstration of experiments or science devices or a slide projector, motion picture, computer and television. In exhibition normally the leaner can act as a spectator unless he/she will be given opportunity to handle and manipulate the devices. The opportunity to handle the materials by the participant makes the way to use more sense organs and Learning by doing always helpful for meaningful or concrete learning.

Field-trip (Educational Excursion): It is a trip by the students to gain firsthand knowledge away from the classroom as to a museum, factory, geological area, or environment of certain plants and animals. A field trip gives students a chance to study something in real environment, rather than in a classroom or laboratory.
At field trips normally students see and note down certain important things. Sometimes they get chance to interview and discuss the things with officials or local people to clarify the doubts with supportive to observation. When observation is combined with participation field trips becomes more meaningful (Dale 1969). Students of Biology, Zoology and History subjects are benefited more through Field trips, because students learn through firsthand experience or learning through direct observation.
Demonstrations: A demonstration is another means whereby pupils can see how certain things are done. Demonstration may require nothing more than observation on the part of the pupil or observer. It is the act of showing or making evident or circumstance of proving or being proved conclusively as by reasoning. It may be description or explanation of a process and illustrated by examples, specimens and it also includes the act of exhibiting the operation or use of a device, machine, process and product. A teacher can demonstrate how to use the pipette in the chemistry and microscope in biology practical.
Dramatization: There are many things we cannot possibly experience at first hand and we cannot experience directly something that has already happened. Furthermore some matters cannot be reduced to contrived experience and some ideas must of necessary be somewhat abstract and symbolic. Dramatic participation can help us get close as possible to certain realities that we cannot reach at first hand.
Dramatic participation which benefit children's education and development in five general areas: physical development/kinesthetic skills, artistic development /drama and theater skills, mental development/thinking skills, personal development/intra-personal skills, and social development/interpersonal skills."
Howard Gardner (1989) described his vision for schools which use multiple intelligences to incorporate authentic learning. Dramatization has the capacity to provide authentic learning as most of the intelligences are utilized in learning activities. For example, dramatization incorporates *verbal linguistic* learning through the use of language, scripts, vocabulary and reading. *Intrapersonal* learning relates to the feelings and emotions involved in drama, characterizations and how we respond as an individual, while *interpersonal* learning comes from working with others to create a scene or role play. *Kinesthetic* learning activates the physical self, the body and doing actions. As students re-create images, pictures, visual details, staging, movement, location and direction with drama their *spatial* learning skills are developed. *Logical* learning follows from using rational patterns, cause and effect relationships and other believable concepts involved with the drama. Sometimes *music,* or even the music of language, is also used in working with drama.

Contrived Experiences (Artificial Experience): A contrived experience is *editing of reality*, an editing which makes the reality easier to grasp. It may be illustrated by working model and it differs from the original either in size or complexity; contrived experiences lead to a suspension of disbelief. In other words, during the period of experience, the learner believes in the reality of the experience. We make use of contrived experiences to overcome limitation of space and time, to edit reality for us to be able to focus on parts or a process of a system that we intend to study and to overcome difficulties of size and finally to understand easily and effectively. Models and mockups are recognizable imitation of the real thing except size which may be scaled down or scaled up to provide the needed experience. It simplifies by eliminating the unnecessary details and emphasizes the key points; this experience will be used increasingly in schools, colleges and other industries.
Models, mock-ups, and cut-aways are additional instructional aids. A model is a copy of a real object. It can be an enlargement, a reduction, or the same size as the original. The scale model represents an exact reproduction of the original, while simplified models do not represent reality in all details. Some models are solid and show only the outline of the object they portray, while others can be manipulated or operated. Still others, called cut-aways, are built in sections and can be taken apart to reveal the internal structure. Whenever possible, the various parts should be labeled or colored to clarify relationships.
We use contrived experiences for four valid reasons. The First is to overcome limitation of space and time second is to edit reality for us to be able to focus on parts or a process of a system that we intend to study. Third to overcome difficulties of size and fourth to understand...
Virtual learning experience *(Near experience):* Though the virtual experience can be called as contrived experience but the pupils level of experience may differ and the kind of joy and level of understanding may be high at virtual than the contrived experiences which include models mockups and cut-aways as we can consider them as hardware. A virtual learning experience involves a set of teaching and learning tools designed to enhance a student's learning experience by including computers and the Internet in the learning process. The representation of the learning environment ranges from text-based interfaces to the most complex 3D graphical output. Nevertheless, representations are not neutral; they do influence the students work. Most often, the rationale for using 3D-graphical representations is motivational.

In computers, 3-D (three dimensions or three-dimensional) describes an image that provides the perception of depth. When 3-D images are made interactive so that users feel involved with the scene, the experience is called Virtual reality.

Smart boards are the best examples for virtual experience where students can conduct science experiments in simulated way. Pupil can add Hydrogen and oxygen gases to get water. They can clearly view the changes happen in the solutions and they can feel as if they are doing the real experiment.

In virtual experience pupil can see and hear but not use the senses of touch and smell. We can bring reality in the classroom which is more than contrived experience and as near as the real experience. The virtual experience is the need of the hour and is a byproduct of technological innovation, in future there will be virtual experiences prevailed in all classrooms around the globe.

Four-Dimensional Experiences: Four-Dimensional Experiences that describes a presentation system combining a Three Dimensional film with Physical effects in the theatre, which occurs in synchronization with the film. Because physical effects can be expensive to install, 4-D films are usually presented only at special venues, such as theme parks and amusement parks. The film Avatar is one of the films that has received the treatment. Some of the effects simulated in 4-D films include strobe lights, rain, wind, and vibration. The use of water sprays and air jets is also common, some seats in 4-D venues vibrate or may move a few inches during the presentation. Due to the fast growth of technology, 3-D Theatres have been enhanced by the addition of special simulations. The combination of 3-D movies with chair movement (sway, tilt, drop, wave motion vibration, or movement in any direction) and other effects, such as water spraying, leg and back ticklers, and wind blowing, is usually considered a 4-D experience. Using additional hall effects, such as rain, lightning, air bubbles, smoke, and special smells (for example, fireworks smells at the *London Eye's Experience* and gassy smells, when the stinkbug sprays it in *It's Tough to be a Bug*) is often regarded by many as 5-D.For the next generation the teaching-learning experience may include effects like 4-D or even 5-D and 6-D.

In Education some of the abstract concepts of literature, history and science can be taught with Four dimensional effects and pupil may enjoy the abstract content in a concrete way with same effect as it is given by the poets in the poems, even at science issues and concepts as if they are experiencing in a real situation.

Ubiquitous learning Experience: Education has undergone major changes in recent years, with the development of digital information transfer, storage and communication methods having a significant effect. After the initial impact and applications of computers in education, the introduction of e-learning and mobile learning epitomized the constant transformations that were occurring in education. Now, the assimilation of ubiquitous computing in education marks another great step forward, with Ubiquitous Learning (u-learning) emerging through the concept of ubiquitous computing.

Ubiquitous means "*pervasive, omnipresent, ever present, and everywhere"*.A ubiquitous learning experience is any setting of the environment in which students can become totally immersed in the learning process. To define, it is a kind of experience where learning is happening all around the student but the student may not even be conscious of the learning process. The Ubiquitous learning Environment includes an ubiquitous computing technology-equipped system supplies users with timely information and relevant services by automatically sensing users' various context data and smartly generating proper results. So the characteristics of a pervasive computing environment can be mainly concluded as the following: User mobility, Resource and location discovery, Context awareness (user/time/location), Collaborative interaction, Ambient information, Calm technology, Event notification, Adaptive interfaces, Invisibility object augmentation, and Any time/anywhere.

Direct Real Experience: Some experiences like observing the process of digestion live through micro cameras in the digestive organs of the human beings which cannot be experienced outside the body of a human being or in any other mode. These are the experiences which can be made available only at the places where man cannot reach and only a technology can reach. Examples like space, depth of the earth, studying the human and animal organs. These experiences can be observed live or in real time through technological gadgets and the same can be used effectively to the students understanding of the processes, certain special environments and sometimes the special actions too.

Direct real experience can give greater experience in learning for the students than virtual or contrived experiences. The pupil will have an opportunity to observe and study directly. Hence its impact may be high on learning than the other earlier experiences. It is also an alternative experience to the direct purposeful experience. When teachers are unable to provide direct purposeful experience, they may only have the best option of direct real experience.

Direct Purposeful Experience: The Base of the *Step Learning Experiences Model* represents direct reality itself as we experience it at first hand. It is the rich full bodied experience that is the base of education. It is the purposeful experience that is seen, handled, tasted, felt, touched, and smelled. It is the experience of life and we get it by living.

Some of our richest, most vivid sense impressions are those which involve our feelings and perceptions in an eager exploration of the world. Making a piece of wood work, tying a knot, preparing a meal, riding bicycle, driving car

are the examples where we directly participate with responsibility for the outcome. This kind of experience more related with learning for life and live learning.
The Cone should be considered as a continuum rather than a hierarchy. Learning occurs through all of the experiences present in the Cone, and all experiences may be appropriate at different stages in the learning process or for different audiences. For example, research shows that children from low socio-economic backgrounds learn best through direct instruction, or lecture, rather than through some of the "more influential" experiences found farther down on the Cone (Lalley and Miller 2007).

The Cone does not demonstrate which is the best method of learning? One can conclude that many different kinds of instruction should be used in the classroom. Since no single method is superior to another, instructors must analyze the audience as well as the content. Some content may fit into one teaching method, while other content may be better suited to another method. Some audiences may learn better through lectures or reading, while other audiences may learn through projects or teaching peers. Most often, the instructor will have to include a variety of teaching methods. Some subjects cannot be taught by using one method or another.

The use of audio-visual materials in teaching does not depend primarily upon reading to convey their meaning. It is based upon the principle that *all* teaching can be greatly improved by the use of such materials because they can help make the learning experience memorable we do not mean that sensory materials must be introduced into every teaching situation. Nor do we suggest that teachers scrap all procedures that do not involve a variety of audio-visual methods (Dale, 1954, p. 3, italics in original). Olfactory, gustatory and tactile experiences are also important because certain amount of learners will be there in every group who are strong at these sense organs. Some of the concepts also need these senses. The step learning experiences model helps in selecting the suitable experiences for such group of students.
Mathematics is a subject of abstract concepts and can be learnt better through verbal and visual symbols, contrived and virtual experiences. It may not be possible to give direct experiences for pupil in subjects like mathematics and statistics.
Verbal and visual experiences are suitable for Language learning. We learn our mother tongue based on verbal experiences and only the extra language can be learnt with the help of visual symbols. Two dimensional aids like television, computers and films are also useful than the visual and verbal experiences because they provide opportunity to hear and visualize the style of intonation use of lip and tongue moment.
Historical events are past events and such experiences can be presented effectively with the help of television programmes and films with the effect of 3 dimensions. It is not possible to give real experiences to the pupils in relation to the events history.
Experiences are meant to experience not to evaluate or compare among them. Experiences are purely individualised, with the same kind of experience one's perception may be differ from others. One can learn better than other, some pupil can learn better with the direct experiences and others can learn easily with virtual experience, some through contrived, one dimensional and two dimensional aids.
John Dewey says that "Direct experience had the disadvantage of being limited in range and fatally restricted"(1946. P-51). Indeed, we learn many things indirectly even better than the direct experience. The direct experience is not necessary or suitable for learning all kinds of concepts.
Instructional design has evolved significantly since 1946 when Edgar Dale created the Cone of Experience. Dale postulated that learning occurs in a hierarchy of experiences, a hierarchy that is continually fluctuating and interacting (Dale 1969). The Cone, of course, is only a model—a helpful reminder. It is not an exact and flawless representation of everything that takes place in the process of learning….The Cone of Experience cannot give a complete description of the vast organic complex that constitutes the process of communication and learning (Dale 1969). Dale also states that verbal symbols, the pinnacle of the cone, have a great deal of value in the learning environment. Simply because verbal symbols are at the pinnacle of the cone does not mean that teachers should not use verbal symbols.

James P. Lalley and Robert H. Miller have examined many different studies about learning and retention and have concluded that the most learning and retention occurs when many different teaching methods are used in the classroom. They found that direct instruction, or lecture, is most commonly used in the classroom and has "a significant effect on retention". Reading, although it appears to have little value based on Dale's Cone will influence the students' ability to learn throughout their lives.
As a rule, educational experiences that involve the learner physically and that give concrete examples are retained longer than abstract experiences such as listening to a lecture or learning from text. Instructional media help add elements of reality - for instance, including pictures or highly involved computer simulations in a lecture.

The different learning experiences in the step model can be chosen by the teachers wisely for their teaching-learning process by considering the content, level of students, environment, difficulty level of the content and objectives to be achieved, etc.

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The Effect of Creative Performance Activity on the Innovation and Creativeness of Children

Assistant Professor Dr. Vahid Motamedi[1], Farzaneh Badrpour[2]

[1]Department of Educational Technology, Faculty of Psychology and Education, Kharazmi University, Tehran Iran
motamedivahid@ymail.com & vmotamedi@khu.ac.ir
[2]Graduate Student
Department of Educational Technology, Faculty of Psychology and Education, Kharazmi University, Tehran, Iran

Abstract:The aim of this study was to investigate the effect of some activities related to creativity of children. The population of this study consisted of Alborz center for intellectual development of children and adolescent. Fifty children (25 for experimental group and 25 for control group) were selected and classified into two experimental and control groups. Torrance creativity test was the instrument for collecting data. Considering the low age of participants, the number of questions and level of the test were lowered so as to be more understandable for children. In order to analyze the finding, an independent t test was taken. The difference between the mean score of creativity in experimental and control was significant for the main hypothesis and the first two sub-hypothesis but the difference was not significant for the third sub-hypothesis. The result of this study showed that the activities of creative show influence children's creativity.
Keywords: Creativity, Innovation, Children, Adolescent

Introduction

Creativity is the God's gift for human and it is in all human beings innately but its emergence and development need suitable environment. According to Torrance (1993) the following items are essential for practical subconscious process of brain to make the creativity: a. willing to risk, b. being aware of our emotions, c. to know ourselves separate from others, d. thinking about other person's beliefs and being sure about our comprehensions, and e. mutual communication with others and making balance in social relations and its incorrect and unpleasant reflections.

Vangundy (1987) has identified the effective and significant reasons of creative environment in three classifications: a. external environment, b. internal environment of group members, and c. the quality of personal relationships among members. The creative and innovative person should be in the suitable environment to express his or her creative thought. The emergence of creative thought is impossible by means of reinforcement and pressure.

It is clear that to achieve the creative thoughts, it is necessary to make negative agents weaker and empower the positive agents. Creativity is dependent on social environment and it will be emerged in social – cultural fields. Family, educational centers, organizations and costumes of each society, make these suitable fields. These fields can have positive or negative effects on creativity. The roles of family and school are very important due to development and self confidant. Research shows that some of these agents are able to weaken the creativity in long time or destroy it totally.

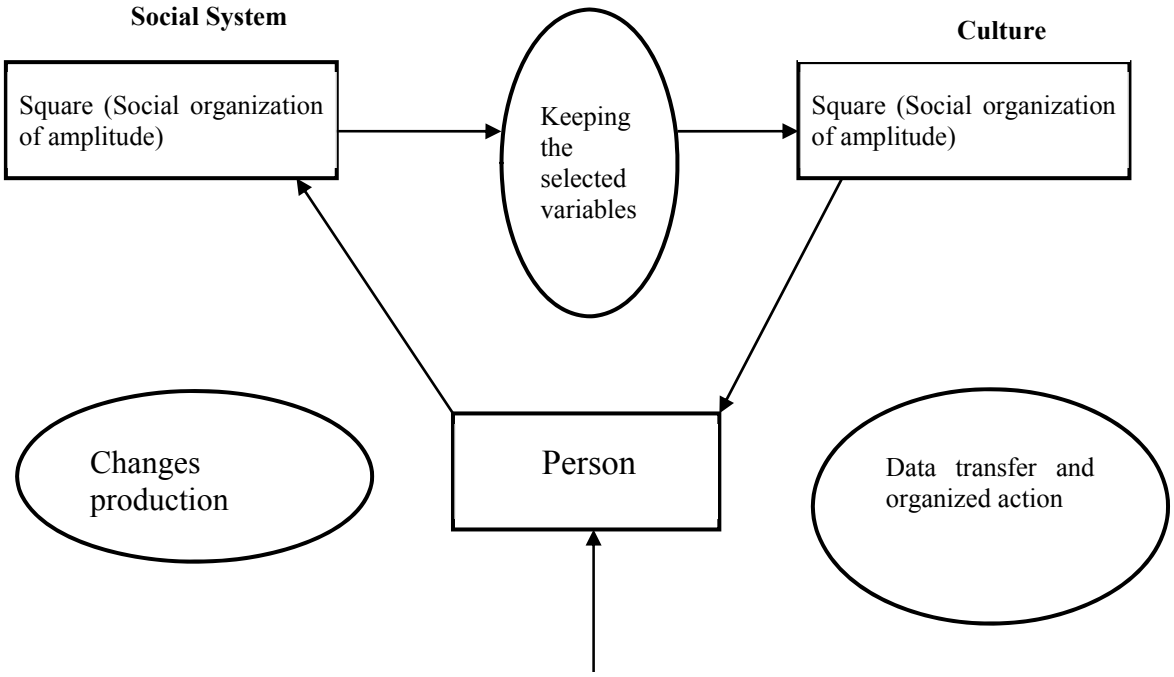
When a child or teenager tries to think creatively and is not supported mentally, emotionally, and socially his or her personality will be menaced. Creativeness as an identified agent act frequently and is always used in daily life, industry, art, literature, sciences and in many other fields and it is developed since childhood and even before birth. Today creativeness is known as a developmental and acquisitive activity as oppose to what was identified in the past as innate thing. Therefore, we can say that some activities such as storytelling, playing with mud and making wooden patterns are important for the creativeness of children and are effective.

Research about creativity and its elements have started by scientists of social sciences particularly by Gilford in 1950s. According to Gilford (1950) the process of creativeness is in the range of intellectual activities. Gilford studied the method of human's thoughts in his explanation of intellectual construction and he has divided thoughts into two groups of convergent and divergent. Gilford introduces the divergent thought as one of the elements of creativeness which has four features: flexibility, origin, versatility and the expansive agent. We can be effective in the development of children's creativeness by using the suitable methods and contents. The communication with book alone cannot be the helpful in making the creative thoughts. Children need a suitable environment and a suitable condition to be able to have creative thoughts. Although the children and teenagers association is one the important organs in developing thoughts, creativity, artistic and literary activities but different cultures play different roles. Among all of these activities the creative performance or theater is one of the main and related activities in the development of creativeness. Instructor is one of the important or the most

important agent which can help the growth and development of creativity and creative thoughts.

The elements of creativity are generalized as cognitive, affective, personal and emotional and social or environmental. According to Amobile (1989) the elements of creativity are interconnected: each is cause by and causes the other. Adams (2005) points out that creativity is a function of the will. He explains that "an explicit decision to be creative, along with a meta-cognitive awareness of the creative process" can do much to enhance "long-term creative results." For Adams motivation is essential to creativity and the creative person is motivated with a passion for his or her field. Some personal aspects of creativity lie in the area of innate talent rather than acquired ability, as with gifted artists, poets, and inventors. Other aspects can be refined or generated through education, for example a preference for building new concepts when confronted with novel experiences rather than trying always to make new ideas fit old theories (Iowa State University, 2015).

Diagram below shows that the internal relations of three systems are correlated event of one thought, topic and creative action and the performance of all three systems for emergence of creativity is essential. In general, emotional, cognitive, and primary experiences are key topics and they are practical for examining the human's creative treatment.



According to the diagram above, a person who is under personal experiences makes some changes and then imports these changes to the social square, some of these changes which are harmonic with cultural amplitude will be kept and imported to the amplitude of culture, and this cycle will continue. Therefore, creativity is not the result of personal action. The purposes of this study is to compare two groups of participants in the creative performance class and astronomy class based on their verbal skill, life skill, and problem solving skill. The main hypothesis is that there is a significant difference between the students of both classes. Second, third, and fourth hypothesis are that there is a difference between these two classes is verbal skill, life skill, and problem solving skill.

Methodology

In this research, there are two groups and there are 25 participants in each group. Experimental group is a group which members are enrolled in the creative performance or theater class and control group is the other one which its member were selected from astronomy class. The population of this study is in Alborz center in Karaj for intellectual development of children and adolescent. The age of participants is between 5 to 12.

The independent variable in this research is the action of creative performance which we want to measure its effect on the dependent variable or creativity. Group's creativity is measured by Torrance questionnaire. Building on Guilford's work and created by Torrance, the Torrance Tests of Creative Thinking (TTCT), a test of

creativity, originally involved simple tests of divergent thinking and other problem solving skills, which were scored on four scales: fluency, flexibility, originality and elaboration. This questionnaire includes 60 questions but is modified to match the participant age. Selected questions were divided into the three features (problem solving skill, verbal or speech skill and daily problem solving skill).

In this research Alfa is between zero and one $0 \le \alpha \le 1$ .If $\alpha = 1$ there is a complete reliability and if $\alpha = 0$ there is not any reliability at all. Based on 20 questionnaires which were used as pretests α for this questionnaire is 0.709.

Table 1

Variable	Alfa Coronbak	Standardized Alfa Coronbak	Statement Numbers
Torens Creativity	0.709	0.702	20

Data Description

In this part we attempted to express the advantageous information of the statistical sample about the aspects of creativity of two groups.

Table 2

Variable	Group	Frequency	Average	SD	Minimum	Maximum	Highest Available Score
Age	Control	25	8.83	1.7	6	12	
	Experimental	26	8.6	2.26	6	12	
Verbal Skill	Control	25	13.41	2.44	8	17	
	Experimental	26	14.92	2.48	8	18	
Life Skill	Control	25	18.2	2.73	13	23	
	Experimental	26	19.88	1.7	16	23	
Problem Solving Skill	Control	25	14.07	2.33	8	18	
	Experimental	26	14.77	1.84	10	18	

The averages of both group's age are close to each other and they are approximately 8. According to the Table 2, the average for experimental group in solving problem skill is 14.77 and in control group is 14.07, the average for the life skill in experimental group is 19.88 and in control group is 18.2 and the average for speech skill for experimental group is 14.92 and for control group is 13.41. The average score of experimental group is higher than control group in all aspects of creativity.

Table 3

Variable	Group	Frequency	Average	SD	Min	Max
Creativity	Control	25	45.66	6.11	31	55
	Experimental	26	49.58	3.93	38	56

The highest available score is 100. According to the Table 3, the average score of creativity for experimental group is 49.58 and for control group is 45.66. Based on the achieved data, it is possible to say that the average score of experimental group is higher than for control group in creativity.

Main Hypothesis

First Hypothesis

There is a meaningful difference between the students of both classes.

Table 4
Comparing the Creativity of Both Classes

Group	Creative Performance		Astronomy		Meaningful Level	T
Variable	SD	Average	SD	Average		
Total Score of Creativity	3.39	49.58	6.02	45.8	0.01	-2.67

As can be seen from Table 4, there is a meaningful difference between the participants of both classes at 0.01 levels. Therefore, with 99% certainty we can say that these groups are different in creativity and the main hypothesis of research is confirmed.

Subordinate Hypothesis

Second Hypothesis

There is a clear difference between these groups in verbal skill.

Table 5
Comparing the Creativity of both Classes in Verbal Skill

Group	Creative Performance		Astronomy		Meaningful Level	T
Variable	SD	Average	SD	Average		
Verbal Skill	2.48	14.92	2.4	13.44	0.035	-2.17

According to Table 5, there is a meaningful difference between the participants of both classes and second hypothesis is confirmed too.

Third Hypothesis

There is a meaningful difference between the members of creative performance class and astronomy class in life skill.

Table 6
Comparing the Creativity of Both Classes in Life Skill

Group	Creative Performance		Astronomy		Meaningful Level	T
Variable	SD	Average	SD	Average		
Life Skill	1.7	19.88	2.7	18.28	0.016	-2.53

According to Table 6, there is a meaningful difference in life skill among the participants of both classes and we can say that the third hypothesis is confirmed. Creative performance class has a better life skill.

Forth Hypothesis

There is a meaningful difference between the children of both groups in problem solving skill.

Table 7
Comparing the Creativity of Both Classes in Problem Solving Skill

Group	Creative Performance		Astronomy		Meaningful Level	T
Variable	SD	Average	SD	Average		
Problem Solving Skill	1.84	14.77	2.29	14.08	0.243	-1.182

According to Table 7, there is not any meaningful difference between the participants of both groups in problem solving skill. Therefore, the forth hypothesis is not confirmed.

Discussion and Conclusion

Creativity is a concept which its definition has changed many times and different researchers have defined it differently although some have identical definition. According to Fisher (2005), creativity has been regarded as a special attribute. He states that researchers have related this quality to one or more of four aspects of creativity: 1. the idea or product created, 2.the process of creativity, 3.the person of creator, and 4.the creative environment. Fisher argues that creativity is something that creative persons make creative products by having original or appropriate creative idea. Creativity is process of producing the exclusive production by means of the existent production. This production only should be new and exclusive for creator concretely or abstractly. Sharp (2004) argues that creativity is an important human characteristic. She states that creativity is "perhaps best thought as a process, requiring a mixture of ingredients, including personality traits, abilities and skills" She suggests that in the early years staff should help children "to develop their creativity by providing a creative environment, helping children to build up their skills through play, behaving creatively themselves and praising children's creative efforts." Creativity is significant and should be encouraged.

Today world is complex and is facing a major turning point in how its many societies, ethnic traditions, ideological viewpoints and philosophical and religious beliefs are reaching to the continued rapid advancement of creativity and technological change. There is a close relation between the type of culture and people's ability to make creative thoughts. There are not any individual in any society which do not have the ability to be creative but there are cultures, political and social barriers. Also, the human's civilization is a production of creativity. Creativity is one of the human's main and basic features.

Creativity is one of main purposes of education. As Piaget (1972) points out the principal goal of education is to create men who are capable of doing new things. The second goal of education, according to him, is to form minds which can be critical, can verify, not accept everything they are offered. The process and existence of creativity is limited in the Iranian educational system as well as in cultural and social level due to the cultural and social barriers.

The center for children and teenage development in Iran is one of the main association which works with children, and because the members of this association are significant for making the future, this research is important and noticeable. Finding of this research can be helpful for instructors, teachers and parents and the results can be valuable for developing of creative performance class.

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The politicization of the Jadid movement in Turkestan (Central Asia)

Bazarbayev Kanat Kaldybekovich[1], Gulzhamal Zhoraeva[2], Elmira Zulpiharova[3]
[1]Khoja Ahmet Yasawi International Kazakh Turkish University, Turkestan, 161200, Kazakhstan
Kanat-08@mail.ru
[2]Khoja Ahmet Yasawi International Kazakh Turkish University, Turkestan, 161200, Kazakhstan
[3]Khoja Ahmet Yasawi International Kazakh Turkish University, Turkestan, 161200, Kazakhstan

Abstract: The article deals with the history of national-progressive movement of the late 19th and early 20th centuries which is called "Jadidism". The history of Jadidism and its evolution from enlightenment to powerful political movement are retraced in the article. Jadidism became an alternative form of the intellectual renewal of Muslim society. The beginning of the movement was connected with the introduction of the phonetics, so called "usul-i jadid", method of teaching reading and writing instead of letter and syllabic one in maktabs and madrasas, that is a new method. The Jadids criticized religious fanaticism, required the substitution of obsolete religious schools for national secular ones, advocated the development of science and culture, supported the publishing of newspapers in the native language, the opening of cultural and educational establishments, which favoured the consolidation of the democratic forces of the society. Jadidism is considered as the phenomenal public occurence in the history. It arouse in the depth of the Central Asian society on the basis of a harmonious combination of a rich spiritual heritage and as realization of its place in realities of that time and the necessity of its reforming for successful prosperity in the future.

1. Introduction

Jadidism has gone through a difficult way of development in dynamics from enlightenment up to a powerful political movement. A serious economic position of the broad masses caused by an imperial policy and local despotism, precarious lag from economically developed countries of the world, cultural regress, stagnation of thoughts induced Jadids to seek for effective means for crisis overcoming.

The Turkestan krai of that time represented the Russian Empire' colony which has become its raw appendage, gratuitously supplying a mother country with its natural resources, particularly with cotton and silk. Later, an extraction program of other natural resources and their driving to the Center has been worked out and only sectors serving these purposes were developed. The Russian capital's appearance in Turkestan provided a stimulus to banks development, railways constructions etc. But the development of the usurious capital appreciably increased the number of broken peasants. By November '12 the indebtedness of the population to the credit unions had amounted to 157 million roubles that led to the increase of landless peasants. By 1917 the number of landless peasants accounts for 30 percent in some districts of Fergana region, 40-50 percent in Tashkent and Andizhan regions of all sectors.

During the First World War over 59 million poods of cotton, 8,5 million poods of cottonseed oil, 950 thousand poods of silk cocoons, 2925 thousand poods of wool were exported from Turkestan kray (National Economy of Turkestan, 1918) and 70 thousand horses, over 12 thousand camels etc. were sent to Russia (Red Archive, Moscow, 1929, p. 54).

On the other hand, the new European culture with a sufficient experience and technological innovations, developed education system which is connected with the European world entered here. And, of course, it could not help influencing on progressively thinking intellects of the kray. At this conjuncture it was obvious that a major cause of social and colonial oppression, backwardness of the country in ignorance and the illiteracy of nation supported by ruling circles. Therefore problem solving was seen only through enlightenment.

This, Jadid movement was formed on educational ideas of the national-progressive intellectuals of Central Asia which had a wide spectrum of problems directed to the development of society.

It is possible to consider Jadidism as one of the branches and variants of reformatory movement of the national-progressive intellectuals in Central Asia which had arisen and has been developing in many countries of the East in the19th and the early 20th centuries. The term "Jadid" came into existence from the concept "*usul-i-dzhadid*" ("a new method") which also included new methods of training per European samples.

Later, as the extension of Jadid movement's taks, the content of the term has also been extended. Along with enlightenment Jadids aspired to change the old system of social and political statuses to progressive forms of development.

2. Cultural and educational activities Jadids in Turkestan

An extensive system of traditional educational establishments and the Jadid schools, opened at the turn of the century, influenced the level of the education and awareness of the local population. For example, there were 5892 schools and 353 madrasas in the country in the early 20th century. (TSGARUz. F.47, Opis' 1, delo 979, list-81(F.47, Inventory 1, file 979. Sheet-81)). Even the tsarist government recognized the fact that the local population

had a high level of literacy. On March 14th, 1909 governor-general of Turkestan P.I Mischenko wrote to the Minister of Public Education of Russia: "The literacy of the natives of Turkestan, especially in its main regions such as Syrdarya, Ferghana and Samarkand, is at a very high level, which is much higher than that of European Russia. A well-developed system of primary schools (schools), secondary and higher education institutions (madrasas) tightly covered most of the territory".

This traditional educational system, possessing its ideological influence, from the very beginning was tightly controlled by the colonial administration. The decree of the Russian emperor, issued on May 17 1875, was the ground for the foundation of Turkestan department of educational establishments, which was granted a power to exercise control over the activity of Russian educational establishments, as well as over the national ones. And on March 14 1894, governor-general Vrevsky approved the post of the third inspector of Turkestan public schools, who had the direct oversight of the traditional institutions of the settled and nomadic population. This inspector served as the governing body in madrasas and schools, so Muslim schools completely passed under the control of the department of public education.

Under those circumstances, the educational activities of the Jadids of Turkestan, becoming an alternative to the activity of the colonial administration in the renewal of education in the territory, acquired a reformative character and had a direct influence on the process of the education of the people. Instead of the traditional education, inseparable in its essence from the medieval scholasticism, they proponed a system of schools, where new methods were used in teaching ("Usul-i sovtiya"). Soon the schools became new-method ones ("Usul-i jadid maktablari"). Besides religion, they were teaching science, the Russian, Arabic and Persian languages, and the genesis of the future intelligentsia was formed. At first, the Jadid schools used textbooks written by Tatar and Azerbaijani enlighteners, but later Turkestan Jadids started to publish textbooks and tutorials themselves. In 1903 and 1904, the books "Kitabul-atfol" ("A book for children"), "Muhtasiri zhugrofiya Rusiya" ("Short geography of Russia") by Mahmudkhoja Behbudi, in the following years, the books "Muallem Awwal" ("First Teacher"), "Muallem soniy" ("Second teacher") and others were published, and in 1905, the number of the Jadid schools in the country reached (Tabyshalieva, 1993).

The main advantage of the Jadid schools was that their students mastered literacy in a few months, besides that, the schools were equipped with modern facilities and teaching aids, namely maps, globes, abacus, blackboards, etc. In 1903 and 1904, Mahmudkhoja Behbudi visited St. Petersburg, Moscow, Kazan, Orenburg, and the Crimea, where he met Ismail Gasprinski who made some changes in his projects to reform the society through a humanitarian way and thoroughly fortified him on that way. Adhering to that path of enlightenment, in 1905 he organized a school with new methods of teaching in the village of Kaftarkhona of Samarkand region and began to teach more than forty students for free ["Samarkand". 1906. May 20].

The colonial authorities feared national schools, including the Jadid ones, believing that they and their activities reinforced the anti-colonial struggle. The measures, taken by the official authorities in relation to these concerns and the limitation of the activities of these schools caused discontent of the national elite. As a result, the imperial government was forced to change the policy of public education, undertaken in the territory. The tsarist government, examining the issue very carefully, created special commissions within the department of local educational establishments. The commissions were aimed to support tight control over national schools, and, basing on the information, provided by these commissions; it developed and adopted common rules for the management of new-method schools. On January 25, 1912 governor-general A.I. Semenov approved the rules, where the requirement was stated: "Secondary new-method schools are opened with the permission of the inspection of public schools. It should be offered to urban and rural communities, which are the founders of the schools, to adopt the nationwide Russian language for children's education"(TSGARUz. F. 47, Opis' 1, delo 149, list-10(Inventory 1, File 149. Sheet-10)).

Progressive youth, feeling the breath of a new historical time, took up the study of the Russian language. In her recollections, Kholida Ayni (Ayni, 1982), the daughter of the famous Jadid writer Sadriddin Ayni, gives a conspicuous fact about her father. In August 1915, the kushbegi summoned 50 Bukharan Jadids and made each of them write a note saying that they would not read the above-mentioned newspaper. These facts indicate that not only colonial authorities, but also the conservative forces of the country fought against the Jadids' ideas.

The Interior Ministry, which gave a special importance to the Jadid schools as a strategic object, on September 22, 1913 sent Turkestan governor-general a special letter that read: "New-method schools by teaching in one (the Turkic language) are campaigning for Muslims' rallying, and their school reformers have the purpose to harm the interests of the Russian statehood and, basing on the religious and national isolation, to unite all Muslims". These two documents became the base for the local colonial power to create obstacles to the movement, supported the interests of the local people in the field of public education.

Publishing activities were widespread along with the educational activities of the Jadids. Many books and periodicals were published in Turkestan. At the beginning of the century, the number of newspapers and magazines was 15. Over the years, Abdollah Avloniy was the editor of the periodicals such as "Khurshid", "Turon", Mahmudkhoja Behbudy edited "Samarkand", "Oyna" ("Mirror"), Munawar Qari Abdurashidkhanov and Mustafa

Shokai edited the newspapers "Kengash" and "Birlik tuy", respectively. The latter was published in the indigenous language. Soviet historians one-sidedly characterized these periodicals as reactionary, pan-Islamic, pan-Turkic ones, but the periodicals played a cultural, educational and politically organizational role in the political and moral life of the people.

In their political positions, the Jadids did not expect Russia to be divided; the matter was the co-operation of Muslims, aimed at the destruction of the colonial chains. The Islamic factor became an indicator of the political self-consciousness for the Muslims of Central Asia in their sense of spiritual and cultural solidarity with the Muslims of the other regions of Russia and all the world (Azamkhujaev, 2000).

Gasprinsky's idea of "unity in language, thoughts and work" continued its life among the representatives of Turkestan society as the idea of national renewal, designed to conform the peoples of Central Asia to the world civilization. The system of their beliefs focused on the global human values and was closely linked to the national interests. We see that this movement was not only of local significance, it became a phenomenon, that obtained an extension of human civilization, and enlightenment, the main idea of their programme developed into the idea of political independence of the nation. The main characteristic of the Jadid movement was its Eurasian character, where the struggle for a democratic society, against the colonial government merged with the struggle against the feudal despotism and religious fanaticism. In their program, they considered the escape from colonialism alongside with the elimination of the feudal order.

Thus, the programme of the Jadids, the main bearers of the ideas of enlightenment in Turkestan in the late 19th and the early 20th century, was as follows: first, to reform Muslim public education and prepare highly qualified specialists in the essential sectors of culture, science and technology; secondly, with the help of trained professionals to develop the economy, industry and agriculture of Turkestan, making it one of the highly developed cultural, scientific and technical territories of Russia; thirdly, to raise the living standards of the people, to improve their well-being; fourthly, to form the national capital, to promote the increase of the number of rich and wealthy people, and, fifthly, with the help of qualified local professionals to change the infrastructure of the society, that is, to conduct the indigenization of the state apparatus, which was a necessary step in the formation of independent states in Turkestan.

The Jadids' programme of this type could satisfy neither tsarist regime nor Soviet power. They both did everything to prevent and prohibit the activities of the Jadids' and destroy them physically. Soviet authorities, with the help of the writers and journalists who were loyal to them declared the Jadids to be nationalists, ideologues of bourgeoisie and "expose" their actions in the press. The terms "pan-Turkist" and "pan-Islamist" were invented to label them.

Despite such aggressive attacks of the totalitarian regime, the Jadids did not only express the interests "of the local bourgeoisie", but demanded from it, primarily, to care about the quality of their goods, their competitiveness, they advocated the need for purchase of modern equipment and technology from the developed European countries. Consequently, the educational activities of the Jadids may be said to cover not only the sphere of education and culture, but also the economic modernization of the country.

In a number of reasons that hindered the advancement towards progress, Jadids have noticed unnecessary and useless traditions (excessive ceremonies, magnificent weddings and funerals) spread in everyday life of people of Turkestan, which had nothing to do with Muslim canons, burdening the life of people which was hard. One of urgent topics to which lots of articles and reports had been devoted was the the Muslim's ethics. Jadids tried to give answers to such questions as how, what kind of way of life the Moslem should conduct, how to treat people around and other nations and religions, women and children.

Ethics questions were always typical for east philosophy. Within the bounds of Jadidism in the most developed form they found their reflection in Abdulla Avloni's (1878-1934) creativity and first of all in his work "Turki Guliston yohud akhlok" (it is literally "the Turkic flower bed or moral") (Avloni, 1998).

According to Avloni ethics means first of all, a practical-pedagogical orientation. It is "a science calling people to good achievements and warning them from bad actions", on the basis of proofs and examples it should display what is good and bad and describe good and bad tempers.

Avloni did not see a moral person without education and the prospering future. Therefore he considered various kinds of human activity and human character traits through a prism of ethical categories. So, for him the knowledge and lack of knowledge are not just phenomena of informative activity and the concept of gnoseology. Knowledge "allows us to distinguish unmistakably good from bad, kind from unkind, permitted from prohibited, pure from dirty", while ignorance means "the beginning of bad temper", "egoism and evil". According to Avloni, moral for the Moslem should be based on universal human values, to have a practical orientation and rationally serve to progress. Jadids considered that the people of Turkestan should possess such qualities as tolerance, devotion, bravery, composure, discipline, conscientiousness, justice and to try to overcome such shortcomings as laziness, idleness, egoism etc. The analysis of these categories was carried out by A.Avloni through the questions of education of young generation to meet the society requirements.

So speaking about discipline, A.Avloni considered it not as quality of a certain person, but much wider i.e.

from the position of a posture in society. He considered that "the nation development, its spiritual growth, perfection depend mostly on timely and qualitative performance of pursuits and duties confronting people".

The leading part in formation of individual A. Avloni gave to education. From his point of view an individual was created as talented and gifted, capabale of distinguishing good and bad, but these qualities were developed in the course of education in which the important role is played by ethics.

Thus, ethics and moral questions were one of the parts of educational work and were in the spotlight of Jadids. They represented and at the same time were the representatives of "new Muslim ethics" taking the elements of world experience in this field. Trips and dialogues with educators from other regions of the Russian Empire helped them to develop it and many other aspects of progressionists' educational program.

In 1905, Abdurashid Ibragimov, a member of bureau of the Central committee of the Russian Moslems worked in this direction in Tashkent. In 1908 before travelling to Cairo a founder of Jadidism, friend and teacher of M.Bekhbudi Ismail Gasprinskiy visited Turkestan again where he familiarized with the work of Samarkand new method schools. In 1910 a well-known Tatar Jadid Sadri Maksudi travelled all around Turkestan kray (Azamhodjaev, 2006). Tashkent Tashkent, being an administrative and cultural center of Central Asian region, became athe office for meetings of representatives of reformatory movements.

Jadids understood that the colonial system of board of the Russian administration in Turkestan not only fail to meet the national needs, but also causes enormous social and economic harms to the country. Therefore their struggle for new method secular education, strengthening the best parts of national identity, intensive development of culture spilled over into a struggle for political independence and democratic government.

However, educational activity of Jadid movements of initial period was not a campaign of purely cultural enlightenment as the Russian populism's educational activity, it also embraced the issues of raising national consciousness. Educating, Jadids made reference to history of Turan which was a great country in the old days and called to know the European history to emphasize that their country as the part of East had made much for the West.

Jadids were convinced that Turkestan kray, being a part of the Muslim world, but representing an independent unique phenomenon in the world history, was obliged to make good its position in the difficult and contradictory future which was opened in the 20th century.

At this stage they considered education as the most paramount issue and would make decisions furiously which was inherent only in young and hotheads.

Analyzing the age of Jadids, we were convinced that their program aimed at organizing the future of Turkestan reflected youth outlook. By 1910 the age structure of movement participants was from 13 to 36 years and above. The head of Jadidism M.Bekhbudi was 36 and A.Chulpan who subsequently became a favourite poet of youth, was 13, F. Khodjayev was 14 at this time. However, none of them made old bones.

3. Socio-political views Jadids in Turkestan

Founded after the February Revolution of 1917, the regional representative body "Shuroi Islamia", the Organization of the Muslim Council was created under the influence of All-Russian Muslim movement at the suggestion of the Jadids of Turkestan. This name was chosen to highlight this political organization among the other organizations, established on the European model. The political activities of the Muslim Council in Turkestan were so intensive and influential, that the Bolsheviks, who came to power, had to abide by it.

Therefore, Soviet historians accused the Jadids of being nationalists, of fostering feelings of hostility towards the Russian people, of being isolated from the people, of the striving to please the national bourgeoisie. If it were true, there would have been neither a Russian nor a Jewish, nor a Polish, nor a Kazakh in the Turkestan Autonomous Government and Munawwar Qari Abdurashidkhanov, Salimkhan Tillyakhanov, Fitrat, Chulpan, Batu and others would not have married Russian women, M.Behbudi would not have advanced the slogan "Speak not only two, but four languages!", meaning the Russian and one of the European languages besides the Uzbek and Persian ones.

M.Behbudi, who traveled a lot about the countries of the world, studied the structure of the state not only in eastern countries, but also in European ones, gave brief information about them in his textbooks and, based on their political system, specified three groups: 1) monarchical, 2) constitutional and parliamentary, and 3) republican. He being a citizen of the Emirate of Bukhara, knew perfectly that a monarchical state cannot give people happiness and freedom, therefore he wholeheartedly supported his colleagues in their aspiration to see Turkestan as a constitutional and parliamentary state (Behbudy, 1999).

A policy of violence, pursued by the colonial administration in the territory, faced to the strong pioneering movement of the Jadids of Turkestan that had intellectual, cultural and humane nature. A new, educated generation of Turkestan merchants, intellectuals and religious figures looked at the colonial power with doubt of its "legitimacy" for the first time. Mahmudkhoja Behbudi volunteered to arouse the hidden forces of the people in order to restore the national statehood and achieve freedom, and his multilateral social and political activities resulted in his becoming a real "father" of the Jadids of Turkestan.

The question: "What was Behbudi's view of the political situation in Turkestan?" can be answered the

following words. He linked the progress of the people with enlightenment, with a radical change in its political status and gaining independence. In his numerous articles, he denounced the colonial policy of the tsarist government and mercilessly criticized the Russian Provisional Government and its laws. He knew that the people would not be able to achieve independence without fight. In the article "The presentation of the truth", he said that in history there were many examples of winning of own rights, that is to say: "The rights have to be won, no one will give them to anyone, peoples and nations can achieve their rights only united around a political movement ... We, Muslims, especially Turkestan Muslims do not want anyone or anything to restrict or put pressure on our religion and nation, we have neither a desire nor an aspiration to threaten someone's independence,". In this regard, he supports Munawwar Qari's idea: "Freedom is not given, it has to be taken" (Munawwar, 1917). However, he does not support Munawwar Qari's thought that freedom can be won with blood and sacrifice. Behbudi, like most of the Jadids, was on the side of bloodless fight against colonialism, so he was against the revolution. He thought that it was possible to achieve much, carefully following the activities of the State Duma and carrying on parliamentary struggle. Despite the fact that he was a supporter of the movement for autonomy, he thought the way of evolution to be the best in order to make progress. He believed that if Turkestan was a part of Russia, it would achieve independence.

On the debate over the state system at the congress, held in Turkestan after the February Revolution, Behbudi proposed that Turkestan take a special place in the structure of federal Russia: "In Tashkent there will be Centres and Medjlises consisting of a few people from each city and county of five provinces of Turkestan. They will engage in the legislative and executive activities, and tax collection. The Medjlis will mediate between Russian government and Muslims ... Naturally, it is necessary that the most of the representatives were Muslims, and least of them were Russians, the work should be carried out not by fiat or by force, but on the basis of compromise" (Behbudy, 1917). These ideas were reinforced by a policy document "The Project of Autonomy" adopted by the party of "Turk Adami markaziyati" (Turkic Federalists), founded in Skobelev city on July 12-14, 1917. M.Shokay writes about the preparation of this document: "National Center" prepared and entrusted to Shaislam Shaahmetbek to provide the documents necessary for the autonomy of Turkestan. He received all possible assistance in it from Mahmudkozha Behbudi, Ubaidullah Koja and me" (Shokai, 1999).

The Jadids, who wholeheartedly supported the ideas of the All-Russian Muslim movement, emphasized the autonomous self-dependency in the federal state structure of Russia, stated in this document. Behbudi advocates unity in the struggle for national liberation with his words: "We must make possible the creation of Russian Muslim federation without breaking ties with Russia, moreover, we, Turkestan Muslims must reject the positions of "old method adherents" and "the Jadids" and create a united alliance". Of course, Behbudi understood that the division of the national liberation movement into the groups, based on religion or ethnicity, weakens the struggle against the colonial system, and he believed that it was necessary to prevent bloodshed, the division of land and wealth on the way of the consolidation of Turkestan, because only a peaceful, bloodless way could bring to social and economic progress.Behbudi participated actively in the establishment of Turkestan mukhtariat, was the ideological inspirer of this process, and was elected a member of the Provisional Government of Turkestan muhtariat. In the early years, speaking about autonomy in his speeches and articles he meant a federation. Later, the concept of "mukhtariat" was processed politically, and in accordance with the Congress's decision got a new concept, "autonomy".

The declaration of the autonomy of Turkestan, which became the first victory of the national-democratic forces in the region, was not supported by "Shuroi Ulema". This movement united by the struggle against the colonial government, divided into groups, as the "father" of the Jadids, Behbudi said with regret: "Our differences in beliefs have destroyed the unity, these troubles are our misfortune. If Turkestan joined, it would be the owner of the power of 15 million people that would be capable of shaking the earth" (Behbudy, 1917).

The hostility within the national liberation movement of Turkestan, due to differences in religious beliefs, was particularly noticeable in the solution of many matters arisen. For example, although the equality of women found support among "Shuroi Islamia", Muslim ulema held the opposite view in this matter. According to Behbudi, despite the fact that the ulema of Tashkent were asked to settle the matter of participation "of women in elections to the women's commission in yashmak, without men" many times, all these requests were not honored. National interests occupied a priority position in Behbudi's activity, that is, he supported the unification of all political forces, which were the supporters of the ideas of the national movement. According to Zaki Ahmed Wali, he did not like the Bolsheviks. Munawwar Qari, Behbudi and the rest of the Jadids spoke out against the Cadets and the socialists. The article "The best in any business is the golden mean" written by Behbudi in 1906, provided an appraisal of the four parties that had a wide spread occurrence in the metropolis. He called the first party a bureaucratic-despotic one, and the order, which it established, totally unfit for the free development of Turkestan. In his opinion, the program of the Social-Democratic Party would be harmful to the Muslims, the financial paragraphs of the programme were invariable, and the human's views on the family were not harmonious and "absolutely unsuited" for the rules of sharia. He did not find warm words about the Cadet party either, and in 1917 at the April congress, being disillusioned with the party because of its great-power ideas, subjected its positions to

harsh criticism. The programme of the "Union of Russian Muslims" was similar to the one of the Cadets', but the party united Muslims with the religious, economic, and ideological points of view, so it was considered to be the most acceptable for the conditions of Turkestan (Behbudy, 1906). The elite, supported the Jadids' views, took these ideas of Behbudi as policy tasks for the political unification and created the ideological foundation for the establishment of the "Shuroi Islamia" party in the territory after the February Revolution.

Beginning with 1918-1919, the Bolshevik cadres were constantly sent to Turkestan from central Russia, in the mid 20s they flooded all the governmental agencies. Turkestan, in the full sense of the word, became a colony of the Soviet empire. The Jadids didn't want to put up with this situation. It was the time when a few of the former Jadids, who held high positions at top echelons of Soviet power, raised the issue of indigenization of the state apparatus. The Bolsheviks, stroke a blow on this few of the ex-Jadids, declared them nationalists and isolated from the society.

The Bolshevik leaders tightened the supervision of the activities of the ex-Jadids. For example, in 1919 Mahmudkhodja Behbudi with his friend Mardonkuli went abroad to participate

in the peace conference in Paris. However, in the territory of the Emirate of Bukhara they were captured and brutally killed by the emir's executioners, and according to contemporaries, it was done with the help of the Bolshevik agents. The other members of the autonomy Ubaidullah Khodjaev, Saidnasyr Mirdjalilov and the leader of the underground organization "Milly ittihod" Munavvar Qari Abdurashidkhanov, and the others were subjected to repression since 1923. Ubaidullah Khodjaev languished in a cell of Butyrskaya prison with a Tatar politician Ilias Alkyn more than a year. At the end of 1929, Munavvar Qari Abdurashidkhanov was charged as one of the leaders of the counterrevolutionary organization "Milly ittihod", in 1930 he was shot and secretly buried in Vagankovskoye Cemetery with his comrades-in-arms Salimkhan Tillyakhanov, Said Ahrori from Uzbekistan, as well as the fighters for independence Zhusubek Aymautov, Abdurahman Baydildin from Kazakhstan and others. At the end of 1937, all the former prominent Uzbek, Kazakh, Tatar scientists and writers such as Abdurauf Fitrat, Gazi Alim Yunusov, Abdullah Qadiri, Chulpan, Bulat Saliev, as well as the state leaders of Uzbekistan and Kazakhstan Faizullo Khodjaev, Turar Ryskulov, Alikhon Buklikhanov and others were shot as the agents of foreign intelligence services, ardent nationalists, Pan-Turkists, fighting against the policy of the Soviet power. Thus, by the end of the thirties no figure of Turkestan Jadid movement escaped his life of execution by a firing squad. In 1937, all the former Jadids were destroyed. And even after their killing, until the mid-80s Jadidism was a taboo subject, and the names of the great representatives of this movement, such as Behbudi, Chulpan, Fitrat and others were impossible to mention without the label of "the enemy of the people" or "a nationalist".

The political and ethnic processes, occurred in the first quarter of the twentieth century in Turkestan, determined the areas of socio-political development. If the Jadids had not had the ideas to substantiate the nature and content of this development, as well as the political movement of the masses that had realized these ideas, the totalitarian power would not have met with strong resistance and it would not have reckoned with the national interests of the local people, and as a result, today's independent Central Asian states would get a completely different look.

4. Jadids idea of religious tolerance

The Russian Empire invasion into Central Asia and its colonization inconsistently had an influence on life, a mode of life, culture and mentality of its people. Collision of two cultures gave rise to new problems, revealing advantages of European civilizations where bearers were dominating structures and its values was rejected by local people. Economy transformation, pouring of the Russian capital into the region, intensive transformation of Turkestan into raw-materials base inevitably required changes of the conditions of life and legal norms. It was difficult process. B. Babadzhanov said: "such situation caused different (mainly negative) reaction to innovations as the dogmatic and legal system of Islam is constructed in that way that its bearers should give an appropriate assessment to any innovations (bid'a). This innovation can be identified as acceptable i.e. "good" (bid'atun khasanatun) and as unacceptable or doubtful.

Also it can be accepted under certain conditions and with reservations"(Babadzhanov,200). Speaking more clearly, theological assessment of innovations gained currency which would allow justifying the participation of Moslems in new processes and giving them blessing. For its realization, first of all, formation of the tolerant attitude to other religions was required so long as all innovations were meant, first of all, as introduced by bearers of other religions such as the Christians and the Hebrew.

National progressionists of Turkestan were real mouthpiece of religious tolerance ideas. They had a general authority on it owing to their religious education, outlook and aspirations. The most outstanding representatives graduated not only madrasahs, but also were in holy orders. For example, Makhmudkhodja Bekhbudi was a hereditary mufti and at his time held this position in Samarkand region. Munavvar kary also worked as an imam of Darkhon mosque in Tashkent after graduation from madrasah and Ishak-khan Ibrat carried out duties of kazy

in Tura-Kurgan.

Jadids, owning cultural capital of the past, having the possibility to travel, see industrial and cultural achievements of Europe and developed Muslim countries, get acquainted with intellectual people and representatives of various social movements, realized perfectly how much Turkestan had lagged behind and they commenced to support a modernization of Muslim cultural traditions of Central Asia. They began the reforms with understanding of the Islamic doctrine.

The American historian A.Halid considers that "Central Asian Jadidism was directly localized by the limits of Muslim modernism... Its rhetorical structure originated in Muslim tradition of Central Asia and consequently in their own traditions Jadids relied on Islam... Modernity "is attached" to"true" meaning of Islam and only Islam cleared from all amendments, appeared for centuries, could provide well-being of Moslems. Coming to new vision of the world, Jadids came to new realization of Islam i.e. to realize what is to be the Moslem" (Adeeb, 1998).

In their theory of society updating the important question was to become close friends with Europe which has made great strides in development and borrowing their great achievements. The way out of the crisis caused by colonial position of Turkestan was found, first of all, in cultural reforms with European experience application. To achieve the goal, firstly, the working out of the legitimization theory of progress by Islam was required and the concepts about the attitude of Islam to the problem of harmonious development of man and society. Jadids tried to realize this idea through literary and journalistic creativity. The important place in this concept was the theme of tolerance: religious and national. These points were seen in the works of Jadids. In the books of Abdurauf Fitrat (Fitrat,2000). "Munozara" and "Indian traveler's stories" two foreigners introduced themselves as competent experts of the Koran and in the name of two foreigners the author appraises the situation concerning education, management, army, social and economic life of Turkestan and Bukhara. There is a supposition that A. Fitrat chose knowingly Frenchman in his first work and Hindu in the second i.e. one European and one Moslem, but not Central Asian, speaking in the name of foreigners about the objective reasons of progress and ayahs of the Koran, calling to it.

A Frenchman marks the universal importance of the Koran and hadis with the following words: "We are people of other religion, but we haven't burned the Koran, we have used it at our interests, have studied to satisfy the thirst for knowledge. We read it which was specified in it and quickly achieved progress. And you, being unable to use its precepts, have come to the crisis". Thereby A.Fitrat points out that Moslems should learn to respect other religions as European progressionists do in relation to Islam.

In opinion of Jadids, religious conservatism prevents from using innovations resulting in crafts and enterprises lag, failing to withstand the competition with the Russian developed industry.

Thus progressionists successfully combined "traditional (theological) mentality with the ideas of having technical and scientific revolution in Muslim societies of the East with appeals to be more open and tolerant" (Babadzhanov,).

However, it did not have them see and scrutinize a national and religious policy of tsarism in Turkestan infringing upon indigenous population's interests, hindering to develop the culture and education adequately (the authorities' encouragement of the Christian-missionary activities, interdictions of Jadid schools and newspapers can be an example). Jadids understood perfectly that the tsarist administration wasn't interested in activization of Moslems and growth of their political consciousness.

But the efforts of the tsarist administration directed to isolation of Turkestan from the influence of political processes, befalling in Russia, Asian and European countries were unsuccessful.Tolerance of national progressionists had strongly developed thanks to their cooperation and relations with like-minded persons from other Muslim regions of Russia, which, in its turn, had been closely connected with the Russian democratic movement.Ideological views of Turkestan Jadids were in many respects modified under the influence of ideological and political currents penetrating into the kray from neighboring countries, because of democratic movement integration" (Abdullayev, 1999).

Jadids took a sober view of the future of Turkestan and did not define the global goal to be independent of Russia, realizing inequality of power and situations, but at the same time they asserted Moslems rights to participate in government management. Especially this situation was displayed after the February Revolution when they believed that Turkestan could possess the equal rights in Federal Russia. However, in their opinion, an essential condition for that was mutual respect, religious and national tolerance of both parties. Mahmudkhodja Bekhbudi, who was a main ideologist of Jadidism, at the time of sharp debate concerning the public management form in Turkestan and indigenous population's participation in elected bodies in April, 1917, said: "It is incorrect to say that Moslems are backward and fanatical. We have known little about each other and have lived together little and only freedom will unite us. The unification of this kind is in Moslems' interests, who wish to study from elder Russian brothers. We are children of Russia and should go ahead together, previous incoveniences are to be forgotten".

If at the first stage of movement development progressionists' main purpose was to unite Moslems embodying democratic forces then by 1917 these ideas went beyond the scope of internal unity. The sovereignty

condition of Turkestan as a part of Russia was to unite all forces regardless of religious and national identity. M.Bekhbudi wrote that the laws are to be issued in the new state that would protect the rights of all Turkestan population, irrespective of religious and racial identity (Bekhbudi, 1917).

The ethnic issue in Jadids's program was solved within the unification of all ethnos. May be it was rather primitive. But their nationalism was closely connected with ethnic concepts. They expressed ethnic feeling with such terms as "Millat" (Nation), "Musulmonlar" (Moslems), "Turkistonliklar" (Turkestan population) and "Turonliklar" (Turan followers). "Millat" by their understanding means Turkic speaking and Iran speaking people inhabited Turkestan, Bukhara and Khiva khanates. "Moslem" is used for all coreligionists and it has not only a religious shade but it reflects the concept of Turkic speaking and Persian speaking population of Turkestan. When Jadids spoke about association of Moslems, of course, they meant not religious consolidation but ethnic. As is obvious from the passage of M.Bekhbudi's article called "Bayoni Haqiqat" where along with ethnic terms as "Russian" and "Jews" the term "Moslems" is used.

At the same time the word "Moslems" is applied as a religious characteristic together with the term "Christians". We can say that because of Jadidism the transformation of a religious concept of Moslem was befallen into ethnic. Political ideas and consolidation of progressive forces, being a key condition of successful struggle against colonialism, led to ethnic consolidation.

5.Conclusion

Jadidism was destroyed by Bolsheviks because the concept of national-state formation and society's breaking of colonialism deadlocks was serious alternative to the totalitarian Soviet system and threatened its downfall. But, despite the sad end, a national-progressive movement founded by Jadids, favoured the development of national self-consciousness, has played an essential role in formation and development of national liberation ideology. Its enduring value is that it had forced to wake up and rouse the fallen asleep East, to remember freedom, national pride, great ancestors, rich culture and others that were consigned to oblivion by colonialism. Their doctrine was true because it carried away all progressive and thinking youth and not only youth. Their actions program became a model for the future generations. A doubtless historical merit of Jadids was their attempts to reform a society starting from the smallest i.e. education and its development was considered the most important thing for progress. Their attempt of political reforms was a striking illustration of conceptual development of their ideas and as for failures as a result of cataclysms in the world to which Turkestan was involved in the XX-th century. Despite the fact that the Jadids and colonial authorities had the similar goals of education, from an ideological point of view they were antithetical, so the Jadid educational system was not supported by the colonial power. Yet, with the support of masses the new-method schools were widespread in the territory and made certain progress in the improvement of literacy. Along with this, the educational activities of the Jadids also covered the economic modernization of the territory.

The Jadids' ideas about the social and cultural modernization of the society were not accepted by the Soviet government, but it had to give class nature to some provisions and use them in the program of reforms. It was related to the granting of autonomy to the local population and the renewal of the education and culture. The social and cultural development of the newly independent Central Asian republics have formed in the same direction, which demonstrates the vitality of the Jadids' ideas, risen in the early twentieth century.The political colour of the Jadid movement strengthened the ideology of the national liberation movement in the territory. Their evidence negated the "legitimacy" of the colonial power and the increased the opposition to colonial oppression of Russia. In addition, in its initial stage, the Soviet government was forced to reckon with the ideas of Jadidism. Thus, the political and ethnic processes in the first quarter of the twentieth century in Turkistan determined the directions of the socio-political development of the region. If the Jadids had not had the ideas to substantiate the nature and content of this development and the political movement of the masses to bring the ideas to fruition, the totalitarian power would not have met with strong resistance and it would not have reckoned with the national interests of the local people, and as a result, today's independent Central Asian states would get a completely different look.

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The Second Language Influence on Foreign Language Learners' Errors: the Case of the French Language for Algerian Students learning English as a Foreign Language

HANIFI Aissa
aissahanifi800@yahoo.com

Abstract: Various researchers have concentrated on those errors which demonstrate the influence of one's native language to second language acquisition. Some would consider them as inhibitory while others pointed out that they are facilitative. The present study shed light on another sphere of interference errors that occur in tri-lingual societies. The scope of the study was narrowed to focus on the role performed by the French language in the frequency of errors made by the Algerian students in their English as Foreign Language (EFL) learning. The study adopted a contrastive approach to discover whether this role is inhibitory or facilitative. The plain task was to give students a text to translate from French to English(version A) .The students were then asked to translate the same text from Arabic to English(version B).A chart was designed to compare the frequency , the type and the degree of severity of errors in both versions of translation. The analysis of the results in the chart showed that the students made less number of errors in the version (A) translation compared with version (B).Hence, the role of the French language in The EFL learning for Algerian students seems rather facilitative.

1-Introduction:

Language transfer (also known as L1 interference, linguistic interference, and cross meaning) refers to speakers or writers applying knowledge from their native language to a second language. There has been much debate upon the importance of the second language interference. Scholars still argue if this interference is beneficial for both teachers and learners or not. According to some scholars, the transfer can be positive when knowing one language can aid in developing skills for a second language. Alternatively, others claim that the transfer can be negative when understanding one language complicates the understanding of another language. The present paper will make the scope larger when it tests the learners' competence that would exceed one second language learning or what is best described as *multilingual acquisition* , i.e. "the acquisition of languages other than the first or second" (Cenoz, 1997).More precisely the study is devoted to depict the interference of both Arabic (students' mother tongue) and French(students' second language) in English (students' foreign language) in the case of Algerian EFL students .The study contrastive analysis hypothesis postulated the existence of positive transfer, resulting from similarity between languages(French and English), and negative transfer , stemming from difference between languages (Arabic and English).

2. Theoretical development of error analysis

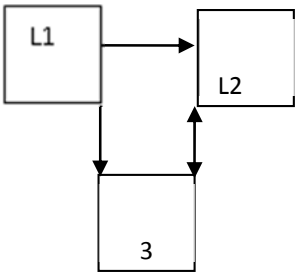
Before tackling the practical side of the study scope we find it important to highlight some theoretical issues that have characterised the development of error analysis since the introduction of the Second Language Acquisition approach.

2.1. Acquisition of multiple languages

Chomsky brought to the fore the notion of *universal grammar* claiming that human learning in general and language acquisition in particular are explainable in terms of an innate human capacity aiding the generation of an infinite number of sentence patterns. Hence, the innate learners' rule formation capacity is resorted to in another language acquisition, i.e. the learners form hypotheses about target language rules and test them in practice. Cenoz (1997) points out that although multilingual acquisition is often considered as a variation of bilingualism and SLA, it is in fact more complex than the latter because it depends not only on the factors and processes involved in SLA but also on the interactions between the multiple languages being learned. It is upon that "bridge" of such interactions that target surface or deep structure of the multiple language influence and get influenced either by negative or positive change. Moreover, Cenoz(1997) explains that there is also more diversity and complexity in multilingual acquisition if we consider other factors such as the age when the different languages are acquired, the environment in which each of the languages is acquired, or the typological distance among the languages involved .More importantly the interactions between the L1 ,L2 and L3, which may be envisaged as a triad ,are reciprocal; whereas, those between L1 and L2, L1 and L3 are probably best visualized as unidirectional if L1 is the learner's native language because whatever influence L2 and L3 might exert on the mother tongue it might be less significant when compared to the influence of L1 on L2 and L3.

Multilingual acquisition of language

According to Cenoz (2OOO) there are at least four possibilities with L3 acquisition orders: i) the three languages are acquired one after the other (L1→L2→L3); ii) L2 and L3 are acquired simultaneously after L1 (L1→L_2/L_3); iii) L1 and L2 are acquired simultaneously before L3 (L_1/L_2→L3), and iv) the learner is in simultaneous contact with the three languages L_1/L_2/L_3).The present paper aims how the four orders affect the Algerian students'learning process of English as an L3.



2.2. Contrastive analysis

In the 1950s, American linguist Robert Lado began to study errors systematically and developed theories about errors via contrastive analysis. Contrastive analysis hypothesis stated that the principal barrier to second language acquisition is the interference of the first language system with the second language system and that a scientific, structural comparison of the two languages in question would enable people to predict and describe both of the problems and the supporting aspects of the second language learning. Such theories were deeply rooted in behaviourism and structuralism and, thus; they held that human language learning was to change old habits and to build new habits. Moreover, errors occur when learners could not respond correctly to a particular stimulus in the second language. Since an error may serve as a negative stimulus which reinforces "bad habits", it should not be allowed to occur. So, in the classroom teaching, they placed more emphasis on mechanical pattern drills and attempted to correct any errors or mistakes wherever they occur.

2.3.Interlanguage and its features

Although it proved some efficiency in detecting the second language learners' errors, the contrastive analysis had some weaknesses in that it emphasises the interference of the outer environment of language study, but the language learners themselves are totally neglected. While interlanguage intended to explore learning strategies based on the learners' errors, and it has become the basis of error analysis.

What is interlanguage? The term was firstly adopted by Selinker(1972) from "interlingual". It refers to the separateness of a second language learners' system that has a structurally intermediate status between the native and target language learners. A number of terms have been coined to describe the perspective which stressed the legitimacy of learners' second language system. Corder (1971) used the term "idiosyncratic dialect" or "language learners' language". Nemser(1971) called it "approximate system". Despite labelled differently, each of these designation share the concept that second language learners are forming their own self-contained independent linguistic systems. This is neither the system of the native language nor the system of the target language, but falls between the two. In the interlanguage legitimate system the learners are no longer looked on as producers of malformed, imperfect language replete with mistakes, but as intelligent and creative beings proceeding through logical, systematic stages of acquisition creatively acting upon their linguistic environment. Another important feature is that this system is dynamic and it is based on the best attempt of learners to produce order and structure to the linguistic stimuli surrounding them. Finally, it is a linguistic system which reflects the psychological process of learning and the psychological process of foreign language learning in particular.

3. Error analysis and treatment:

In order to analyze learners' errors from a proper scope, it is crucial to make a distinction between "mistake" and "error". Errors are made when learners of L2 produce incorrect language because they do not know the correct form, while mistakes are made when learners produce incorrect language although they know the correct form. Learners can correct their own mistakes, but by definition, they cannot correct errors. According to Brown (2000), a "mistake" refers to a performance error in that it is a failure to utilize a known system correctly. While an "error" is a noticeable deviation from the adult grammar of a native speaker and that reflects the interlanguage competence of the learner. This recognition process is followed by the error description process. We compare learners' sentences with the correct sentences in target language, and find the errors. Then we come to the next step which is the stage of finding the sources of errors.

4.Categorization of learners' errors

The following perspective is an overall presentation of the main types of errors that may occur in learners' language transfer. The learners' errors can be categorized in terms of various criteria. One type of that categorization is what Corder refers to as *expressive* and *receptive errors* which are manifestations of expressive and receptive behaviour and depend upon knowledge of the "formation rules" of a language. "*Inadequate knowledge of these rules will therefore show itself in both sorts of behaviour. But it is much easier to detect imperfect knowledge in the case of expressive behaviour. Expression leaves traces transient, but recordable, in the case of speech, permanent in the case of writing*." (Corder, 1973: 261).

Generally speaking, language errors can be classified according to: a. linguistic levels (i.e., pronunciation, grammar, vocabulary, and style), b. form (e.g., omission, insertion, and substitution), c. type (systematic errors/errors in competence vs. occasional errors/errors in performance), d. cause (e.g., interference, interlanguage), e. norm vs. system and f. modality (i.e., level of proficiency in speaking, writing, listening speaking).

To delve into deeper issues,three main processes interfere in the errors that EFL learners make: a. *transfer of rules* from the mother-tongue, b. *redundancy reduction* by omitting elements and c. *overgeneralization* of foreign language rules.

4.1. Transfer of rules

Language transfer (also known as L1 interference, linguistic interference, and cross meaning) refers to speakers or writers applying knowledge from their native language to a second language. It is most commonly discussed in the context of English language learning and teaching, but it can occur in any situation when someone does not have a native-level command of a language, as when translating into a second language. In transfer rules errors the EFL learners tend to use their previous mother tongue experience as a means of organising the foreign language data .Such rules deriving from existing habits prevent correct speech from being established. Transfer errors are "interlingual" since they come from the interaction between the first and second or foreign language.

4.2. Redundancy reduction

This is a tendency by EFL learners to eliminate many items or add unnecessary items, either by ignorance or intensively, which are redundant to conveying the intended message. For instance, in the case of a learner of English language as a foreign language we may meet utterances, such as: "No understand", "return back" etc. It is rather a simplified code of communication or reduced language systems used by foreign language learners especially in earlier stages of the learning process.

4.3. Overgeneralization

In the foreign language rules (and where belongs the majority of 'intralingual' errors) the learner while trying constructing rules which predict how the different items will behave, sometimes, his/her predictions are wrong, probably for one of two main reasons: *a*- an exception to the general rule or because *b*- a new category and rule must be constructed. In either case, the learner's initial error is due to overgeneralization of the rule which causes the wrong prediction. In the case of overgeneralization, it is his/her previous knowledge of the foreign language that the learner uses. Lee (1990) elaborates on the following classification of learner errors:

- *Grammatical (morphosyntactic) errors* where the stress is on the need for grammatical accuracy in both speech and writing. This may hinder communication but errors at the sentence level often reflect performance "mistakes" for which immediate teacher correction is not necessarily appropriate.
- *Discourse errors* are dependable upon the observance of the rules of speaking and writing and reflect learners' cultural and pragmatic knowledge of language use.
- *Phonologically-induced errors* are manifested in wrong pronunciation and/or intonation; in the case of English studied as a foreign language such errors necessitate timely correction on the part of the teacher because vowel length, voiced and voiceless last consonants, word stress, etc. may have a meaning-differentiating function, as in *live/leave*, *leave/leaf, import(n)* and *import(v)*, and so on.
- *Lexical errors* are linked with errors belonging to the other linguistic levels which may also hamper communication and intelligibility.

As the focus of the present paper will only tackle the linguistic issue of the language transfer, the plain task is to categorize learner errors on the basis of the linguistic levels testifying their manifestation in the different aspects of the language learning interference.

4.4. Phonological interference

Pyun (in Mehlhorn, 2007) claims that language learners' interlanguage owes phonological knowledge to L1 rules, L2 (first foreign language) rules, L3 (foreign language being studied) rules, and "interrules", the latter described as "bridges" between the already acquired languages and L3.This is manifested in speaking and reading and is usually indicated by recourse to word stress, intonation and speech sounds typical of French which influence the acquisition of English. This can clearly illustrated in the following examples :

1. The initial "h" is not pronounced, e.g.: *hemisphere* [`emisfiə] instead of [`hemisfiə], *hotel* [o`tel] instead of [həu`tel], etc. Occasionally, the non-initial [h] sound is also omitted, as in *alcohol* [`alkool]. In French, the letter "h" is always silent.

2. The "-ure" ending in polysyllabic words is pronounced as [juə], e.g.: literature [literə`tjuə] instead of [`litriʧə], again with a change of word stress. Compare, for example, with the pronunciation of the French *voiture* ("automobile, car").

Because the actual contrastive analysis of the present study will be on a written corpus we shall not depict all possible errors that are rooted to the phonological interference since such kinds of errors cannot be depicted in the learners' target written corpus after all.

4.5. Orthographic interference

This occurs at the level of writing where words' spelling are altered under the influence of French. The

following examples can illustrate such alteration:

1-The addition of an extra "-e" at the end of words, e.g.: *closenesse* instead of *closeness*, *groupe* instead of *group*, *seniore* instead of *senior*, *Greeke* instead of *Greek*, etc.

2-The adoption of a French suffix such as *–ique, -eur,* and *–oire*, e.g.: *electrique* instead of *electric* .

4.6. Lexical interference

It is manifested in speaking and writing and is represented by the borrowing of French words which may or may not be converted to sound more natural in English. Francophone learners of English tend to use French words in order to fill in the existing gaps in their knowledge of English vocabulary, e.g.:*langues* instead of *languages*,*fautes* instead of *mistakes* ,*tache* instead of *task ect* ...

4.7. Grammatical interference

L2 influences L3 in terms of word order, use of pronouns and determiners, tense and mood: There are modifications to word order due to the influence of French. , most often illustrated in the placement of adjectives after nouns in noun phrases. In French, most adjectives go after the word they modify.e.g:*factor important* instead of *big factor, image clear* instead of *clear image ect*….The use of definite articles with proper nouns is a French language feature which is sometimes transferred by the francophone learners when uttering English words .e.g: *The professor Brackert teaches in Frankfurt.* Among the other kinds of grammatical interference from French to English is also the use of a different tense .e.g: *I study here for a year* or *he has left yesterday* and the wrong use of the relative pronoun .e.g: *Here is the student which you met her last week* or *the people which arrived.*

5. Method of data collection and analysis

Our study specifically is based on a survey of university students having French as their second language and studying English as a foreign language in ELT department at Chlef University preparing their first year of Master Degree. The method was simple in that we gave a short passage of about 100 words to 25 students to translate first from French into English; we called that version(A) ,then we asked them to translate the same passage from Arabic to French and we referred to it as version (B).the target students were chosen at random as that we aimed to test their abilities in translation for a short text that dealt mainly with the concept of "bilingualism"; a linguistic issue that would both raise their interest and match appropriately the scope of the study . As we have focused on the written form of the language, we have not dealt with the spoken language e.g. pronunciation, intonation word stress, sentence stress ect... and we wish to target this case in other studies. After that the handouts were collected, we started sorting out errors committed by the students in both versions as it is clarified in the two tables below:

Language Features	**Sample transfer error in English**	**Frequency of errors**
ARTICLES • Definite article used for generalization.	• …that rely on the representations of *the* individuals…	(2 times)
NOUNS, PRONOUNS, ADJECTIVES, ADVERBS • The wrong noun • Wrong affixation • Wrong adjective • Wrong adverb • Redundancy	• …built on representations of the *persons… Billinguality* additive • ...in order to develope *axtra knowledgement*.....in Educational powerful *programmation*..... • ....Studies that shows that is *necessare* to impose.... Billinguality *additive* • *even* the conditions does not encourage**,**the progress of ... • *...the representations* of individuals....	(2times) (3 times) (1 time) (4 times) (1time)
SENTENCE FORM , WORD ORDER • Wrong placement of adjectives	• …Studies that seem necessary to make *available* to the education… ...so-called competence *additive* bilingualism.... ...in Educational *powerful* programmation....	(3 times)

VERBS , TENSES • Wrong verb agreement • No-ing (gerund)	• …can pave the path to the success of all tasks which *has*.. • …who are capable *to use* two languages…. .	(4 times) (2 times)

Language Transfer Errors from French into English (version A) Table 1:

Language Features	**Sample transfer error in English**	**The frequency of errors**
ARTICLES • No definite article with definite items. • Definite article with words that carry general meanings	• … Arabic/French bilinguism is not … • …Which aims to form *the* bilingual people who…	(6 times) (4 times)
VERBS AND AUXILIARIES • Be is omitted. • Wrong verb endings/subject-verb agreement • Placing the verb at the end of the sentence	• ...but also a case study that necessary... • …large investigation that *go* beyond this competence….. …. The progress of bilingual individuals *allow* individuals..... ....the conditions *does* not..... .....Studies that *shows*..... • ....that can make any task for language learning *succeed*…..	(3 times) (5 times) (4 times)
WORD ORDER AND SENTENCE STRUCTURE • Adjective placement • Redundancy	• ... to impose this in *Educational powerful* programmation.... ....develope competence called Billinguality *additive*..... Studies that seem necessary to make *available* to the education sector….. • ....develop the efficiency of the language known *as double or Bilingual* .	(4 times) (3 times)
NOUNS, PRONOUNS, ADJECTIVES, ADVERBS. • Adjective restatement • Mis-use of the possessive case Using an adjective instead of an adverb • Wrong placement of adverbs • Wrong word • Wrong noun	• ...Even if *all* the conditions needed are not *all* there.... • …its impact on Algerian*'s* personality… from the simple notion to *her* effectness on the Algerians personalities ….. • ...,but also a case study that *necessary* requires.... • …the current trend aims to…,*also* it aims to develop….. • ...The existing *tend* in Algeria aiming…. • *The programmation*.....	(6 times) (4 times) (1 time) (3 times) (1 time) (1 time)

Table 2: Language Transfer Errors from Arabic into English (version B)

It is worth mentioning that we relied on the *Language Guide to Transfer Errors* (Wigan Council) that covers more than twenty languages, including Arabic and French common errors depicted in EFL learners, in sorting out the different students' errors.

The error analysis in both language transfers shows that the students made more errors in the second version of translation (from Arabic into English) than the first one (from French into English).This could be attributed to the similarity of the morpho-syntactic features that both of the French and English language share. Historically speaking, French and English do not belong to the same origin. The former is part of the Romance subgroup of Indo-European languages, whereas the latter belongs to the Germanic branch. Since the two languages have been in contact at different stages of their development and for quite long periods of time, the origin of over 70% of the English vocabulary can be traced back to French and Latin, the ancestor of all Italic languages. . At first glance, this simple historical fact suggests that the students are not likely to encounter such difficulties in studying English as a foreign language. This is, however, a superficial idea because it turns out that similarities between languages may actually constitute differences in disguise. . In other words, similarity of form does not always presuppose similarity of function. In fact, students still face some difficulties in being more accurate in their English language usage. For instance, lexically speaking, they tend to use French words in order to fill in the existing gaps in their knowledge of English vocabulary (lexical interference)e.g:*necessaire* instead of *necessary.*Furherrmore,an error like *programmation* is due a language interference which has a direct relation with one of the French language own way of forming noun by adding the *ation/tion* suffix to the end of some word roots.Concerning grammatical interference, There are modifications to word order attributable to the influence of French, most often illustrated in the placement of adjectives after nouns in noun phrases.e.g: *competence additive* .In French, most adjectives go after the word they modify. Such word order is not typical of English where the adjective often precedes the noun. Concerning word order at the sentence level, the students tend to place the verb before the subject English where the word order is fixed and follows the *subject/verb/object* pattern. With regard to the second version of translation (from Arabic into English), there has been depicted also some features of language interference errors such as using the wrong possessive case in expressions like *its impact on Algerian's personality… from the simple notion to her effectness*.... . The use of the pronoun "her" in such a statement is attributed to a sort of Arabic language interference where such pronoun can refer both to the feminine and the neuter gender. Starting the sentence clause with the adverb *even* instead of the conjunction *eventhough* to start a concession or contrast sentence is much attributable to the Arabic language interference.

As part of the teaching role, it is fundamental for the EFL teacher to look for the most efficient ways to bring feedback and correction the students' mistakes and errors. However, the teacher should know when to interfere for such correction. First, we are confronted with a dilemma—fluency versus accuracy. If the purpose is mainly communicative, it is advisable to delay correction. Some teachers believe that the correction is determined by the type of errors committed. For instance, if they are pronunciation or grammatical errors, immediate correction is preferable, for post-correction cannot make learners remember anything. When the whole class is familiar with a word, but only one of them is singled out for being corrected, he or she would feel awkward. So, we can see that when to correct is very complicated. Both of the teachers' intuition and the feedback from the students are equally important. Furthermore, the EFL teacher should know how to correct the students' committed mistakes in a tactful way. According to James (1998), it is sensible to follow the three principles in error correction. Firstly, the techniques involved in error correction would be able to enhance the students' accuracy in expression. Secondly, the students' affective factors should be taken into consideration and the correction should not be face-threatening to the students. Lastly, the class manager should be aware of the type of errors that need urgent and immediate correction. Burt (1975) made a distinction between "global" and "local" errors. Global errors hinder communication and they prevent the learner from comprehending some aspects of the message. Local errors only affect a single element of a sentence, but do not prevent a message from being heard. Thus, the teacher's focus should be much on the correction of global errors.

Conclusion

Despite the limitations of the of the study namely the contrastive analysis in depicting all L2 and EFL learners errors since it focuses only on the outside environment of the learners and neglects the language learners themselves ,the focus on learner errors is nevertheless useful to language teachers as a means of enhancing teaching methodology. An awareness of the types of errors learners tend to commit is necessary for language teachers so that they are able to properly and timely correct inappropriate and unacceptable utterances. Concerning Algerian learners of English as a second foreign language, it must be noted that even if orthographic interference is successfully dealt with, by means of dictations or plenty of written assignments, phonologically-induced interference and lexical interference postulate graver problems to the teacher compared with that of the French language. Thus, the teacher should be skillful in managing the correction of the learners' errors. In other words, he or she should know exactly what errors should be corrected, when to correct errors and how to correct them.

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Use of a numerical strategy framework in the professional development of teachers

Peter G. Hughes
Kumar Laxman
Faculty of Education, School of Curriculum & Pedagogy
University of Auckland, New Zealand
haribol.kumar@gmail.com

Abstruct:Derived initially from a strategic analysis of children's methods of counting, the New Zealand Numeracy Projects used, as a starting point for the professional development of teachers, a strategy framework that traces children's development in number reasoning. A pilot study indicated the usefulness of professional development where teachers use the framework to determine the number reasoning of students in their own classes. Subsequently, as part of the professional development offered for the Projects, a DVD showing numerous video clips of students was produced to show teachers what range of number strategic thinking they might expect in their classes. In the next five years more clips were added and some edited out. This paper outlines how the video clips were incorporated into the initial stages of the enhanced teacher professional development model to enhance teaching effectiveness in using the strategic number framework, and how these clips are used in the pre-service education of student teachers at the University of Auckland.

Introduction

Arising originally from disappointing results in the Third International Mathematics and Science Study (Garden 1996, 1997) the New Zealand Ministry of Education delivered a series of the Numeracy Projects (NPs) that covered students in years 1 to 10; the NPs began in 2000 and ended in 2010.

In 2000 a Count Me In Too (CMIT) pilot, which was a Professional Development (PD) project for year one to three students (NSWDET, 1999), was trialled (Thomas & Ward, 2001). In 2001 this was succeeded by the Early Numeracy Project (ENP) (Thomas and Ward, 2002) for the same year groups. Also in 2001 the Advanced Numeracy Project (ANP), which was for PD of teachers of year 4 to 6 students (Higgins, 2002), was introduced. In 2002 a PD project, the Intermediate Numeracy Project (INP) was added (Irwin, 2003) - in New Zealand intermediate schools operate at the middle school level. Also in 2002 a PD project, Te Poutama Tau, delivered in the Maori language was developed for teachers working in Maori language emersion classes (Christensen, 2003). Finally, in 2005, the Secondary Numeracy Project (SNP) for PD of mathematics teachers teaching students in the first two years of secondary school was introduced (MoE, 2006) - these are years 9 and 10 in the New Zealand school system.

The intention of this set of nation-wide projects was to give as many primary teachers and secondary mathematics teachers the opportunity for PD in teaching numeracy. Logistically it proved impossible to train enough numeracy PD facilitators for the projects for them to be delivered in a short period of time; consequently the projects took eleven years to deliver. About 27 000 primary teachers, representing over 95% of the teaching force, participated in the projects; performance data from the approximately 540 000 students they taught was gathered by the Ministry of Education. Only some secondary mathematics had the opportunity to participate in the SNP.

At the core of the PD of all the NPs was an attempt to shift teachers' pedagogy to take into account the strategic number thinking of their students. A small scale trial before the start of the projects (Hughes, 1995) indicated that New Zealand teachers knew very little about the complexities of their students' numerical strategic thinking, and that consequently their teaching tended to emphasise low-level algorithmic activity. The research was based on the work of Steffe and colleagues (Steffe et al, 1983, 1988) on children's stages in developing counting strategies, which was capped off with a part-whole reasoning stage where students changed from counting methods moving parts of numbers mentally to calculate answers. For example, a counter might solve 27 + 8 by counting-on from 28 to 35 whereas a part-whole thinker would typically likely add 3 to get 30 then add a further 5 to get 35.

These strategy stages were spelt out in tabular form by Steffe's PhD student Bob Wright (Wright, 1991, 1998, Wright et al 2000, 2002). This framework was used by Wright as the basis for a Mathematics Recovery programme modelled on a New Zealand PD initiative called Reading Recovery (Watson & Agnew, 2009). In 1996 Wright was asked by the New South Wales Department of Education and Training (NSWDET) to create a strategic number thinking assessment tool for the CMIT project (NSWDET, 1999). This material was used in New Zealand in the CMIT pilot in 2000, and modified for use in the NPs in future years.

Description of a preliminary study to enhance professional development

By the early 1980s, the predominant "normal science" in mathematics education research, in which carefully gathered experimental data was interpreted through statistical tests like the null hypothesis from which

empirically based generalisations might be drawn, radical constructivists had developed a new paradigm where the teacher/researcher taught children and observed the children's mathematical actions (Steffe and Kieren, 1994). The teacher/researcher then used a conceptual analysis to build models of children's mathematical knowledge and its construction. This new paradigm served as the basis for the design of the enhanced professional development framework aimed at helping teachers to critically reflect upon and change their own mathematics teaching practices. An early example of this research was Children's Counting Types (Steffe et al, 1983); the types of children's number thinking would become embedded in the NPs.

There was evidence, before the start of the NPs in 2000, that the effective use by teachers of the strategy framework leading to part-whole thinking would require a shift in their view of teaching mathematics. As part of the enhanced professional development (PD) efforts, a pilot study was undertaken to examine this with three experienced teachers of year four students (Hughes, 1995). One of its objectives was to find the effect on teachers' practices through their diagnostic assessment of the counting types and part-whole thinking their children used. The study sought to find the effects on teaching by facilitating teachers' observing and finding out through individual interviews more about how children solve numerical problems.

Before the initial study it was conjectured that interviewing children from a teacher's class about their mathematical knowledge would be a disequilibrating factor in the teacher's pedagogy. The first author of this paper conjectured that teachers interviewing children in their classes about the number strategies mathematical would often surprise them as the teachers would typically lack understanding of their students' strategising; the difference in the mathematical processes actually used by children in their class and the teachers' belief about their processes would likely be significantly in conflict. A further conjecture was that, should disequilibration occur, teachers would feel responsible for changing their teaching practice, and therefore would be more ready to experiment with teaching strategies that would enable them to accomplish this. For the sake of brevity, only one of the case studies involving a single teacher is reported in this paper. Her reactions were similar to the other two teachers who participated in this study.

Case study approach

A case study is a suitable research methodology when a holistic, in-depth investigation is needed (Feagin, Orum, & Sjoberg, 1991). Case studies are designed to bring out the details from the viewpoint of the participants by using multiple sources of data. Selected cases must be done so as to maximize what can be learned in the period of time available for the study. The participant teachers who formed the case studies of this study provided the reflective voices in understanding the impact of reviewing student interviews on learning efficacy upon classroom teaching practices.

The case study

Before interviewing three children in her class of differing abilities Ms B believed that the strategy stage that children operated at for addition was not important:

> It is going to be faster [to use part-whole strategies rather than counting] but it doesn't matter. The way I think if they are using the fingers now, eventually they are not going to, there is no point in me saying you can't use your fingers.

However, after interviewing three children from her class and reviewing transcripts of year 4 children's strategic thinking in number from another class, Ms B was very surprised by their thinking:

> I was overwhelmed at the variance of thinking of less able and more able children. I was not aware of the strategies [for single digit additions] that could be taught. In the past I would teach 6 + 5 = 11. That is the answer and the children would eventually learn it. Now I see the importance of strategies. I can now see that
>
> 6 + 5 = 12 - 1 = 11 or 6 + 5 = 10 + 1 = 11.
>
> It appears that the children who can use strategies think laterally and this knowledge is transferred across all areas of maths and other curriculum.

Initially the children's' responses in the interviews of pupils in her class were confusing for the teacher:

> I must be honest. I was lost at times. Only now can I understand their logic. For example previously for 51 - 29 = 38. I would not have analysed the problem. It was just right or wrong. I wondered could I ever make a difference with these children.

However, by the time she interviewed three more children from her class without the researcher present, her confidence had improved:

> I was more knowledgeable. I could identify gaps more easily. The [part-whole] strategies [for single digit addition] I had taught were starting to appear. Halleluiah!

Following the sessions where Ms B watched children in her class struggling to learn the standard arithmetic algorithms for subtraction, she began to criticise the way she was teaching it. She describes what she used to do:

> To do 81 - 29 in the vertical form. They would sit in a half circle on the mat with those little chalk boards, the place-value blocks and then I would put up 81 take away 29. Then straight away I used to do the crossing out with the chalk.

These teaching sessions led Ms B to re-evaluate her beliefs about teaching mathematics.

> I've always thought children learnt progressively. And I've always thought that we teach progressively, that we teach one thing. For example, we teach no re-naming and then we teach re-naming double-digit. Then we teach no re-naming three-digits and then re-naming three digits like that, it was all sequential and it was progressive. But I know now after doing this [study] for the year that learning isn't progressive and teaching isn't progressive.

The interviews with children from her class proved to be an important element in stimulating Ms B to change her teaching methods in mathematics. Initially the way in which the children were thinking about mathematics was a matter of indifference, then a source of confusion and then surprise. A combination of pedagogical content sessions with the other teachers, which Ms B found challenging, and teaching sessions with students from her class, in which constructivist teaching was used, led Ms B to experiment with mathematics teaching methods that were much more child centred. Ms B was positive in her own mind that the mathematics learning that was now taking place in her class was superior to what had taken place before the study.
The interviews with children from her class proved to be an important element in stimulating Ms B to change her teaching methods in mathematics.

The conjecture that exposing teachers to the mathematical thinking used by children in their own classes would lead those teachers to re-evaluate and experiment with their teaching proved true in the case of Ms B.

Production and use of video clips in the NPs

Encouraged by the evidence from this small-scale pilot, in 1998 the first author of this paper developed and taught a graduate diploma paper at Auckland College of Education that began with teachers learning about students' numerical strategy stages through viewing video clips from a CMIT video (NSWDET, 1997); this was followed up by teachers interviewing children in their classes using the CMIT diagnostic tool. Essentially this tool, with modifications, became the basis for the assessments of students' strategic thinking for enhanced PD of teachers in the NPs.

In the CMIT video some academics and teachers talk about CMIT, and a number of children solve number problem I a way that demonstrates their level of strategic thinking. Believing that teachers would learn more from seeing children solving problems than hearing the project being discussed the first author did not show the discussions between academics and the teacher studio audience, but did show the children solving number problems; this feature would continue in the video clips that the first researcher would make for the NPs. The mathematics curriculum officer for the Ministry of Education attended the lecture in one of the courses in which CMIT video clips were shown and discussed. Both the lecturer and curriculum officer felt that participant teachers were keenly interested in the clips. Consequently a decision to gather video clips of New Zealand children answering strategy questions as part of the 2000 CMIT pilot was made. More clips were gathered over the next six years. Eventually these clips included students from year 1 to year 10, and from stage 0 to stage 8 of the numeracy strategy framework (Table 1). By the end there were seven editions of the video clips DVD (Hughes et al, 2000 to 2006).

Table 1
Counting Stages and Part-whole Stages - Video clips by frequency and range of year range produced for the final DVD

Stage	Counting Strategy Stages	Number of Clips	Student Year Level
0	Emergent	2	Years 0-1
1	One-to-one Counting	5	Years 1-2
2	Counting from One on Materials	3	Years 0-2
3	Counting from One by Imaging	3	Years 0-1
4	Advanced Counting	7	Years 2-10
	Part-Whole Strategy Stages		
5	Early Additive Part-Whole	14	Years 1-10
6	Advanced Additive Part-Whole	9	Years 3-10
7	Advanced Multiplicative Part-Whole	10	Years 4- 10
8	Advanced Proportional Part-Whole	9	Years 6-10

Note: In New Zealand schools year 0 students are those who have just recently started school.

Over time the writer/director of the videos, who is the first author of this paper, developed a number of principles for the production and selection of video clips for teacher PD:

- Only a small number of strategy questions would be asked of any student - no student would do a full whole interview.
- Students were not permitted to write down anything. This is designed to reduce the chance that students would try to use standard algorithms when they are expected to use strategic part-whole reasoning. (Algorithmic methods were deemed not to provide any evidence of students' strategic thinking.)
- The interviewers were not permitted to teach, rather they were expected to encourage the student explaining their thinking as best they could. Interviewers could ask clarifying questions like "What were you thinking?" but not offer any scaffolding. Clips where the interviewers, who were variously teachers and mathematics education lecturers, engaged in teaching by "leading the witness" to the answer were edited out.
- The clarity of student actions and words indicating their strategic method was important. Because the video clips would normally be the first exposure of teachers to the strategies framework undertaking the PD special care was taken to use clips where the student explanation or actions made it plain what strategy they were using.
- Samples from a wide a range of ages for any given strategy stage were obtained. The intention was to indicate in the teacher PD that age is an unreliable predictor for the level of strategic teaching.
- Four students from one school were followed longitudinally over four years. The purpose was to indicate to teachers in the PD how student progress may occur through the framework. And indeed the progress was often striking; in one case the clips show a boy who in year 1 is at stage 1, in year 3 at stage 5, and in year five stage 6.
- The video clips were representative of New Zealand society. Students across all ages and stages were a balance of ethnicities and cultures in the New Zealand population. At any age it was unacceptable to have a predominance of any ethnicities in the lower stages and other ethnicities in the higher stages.
- Clips showing non-verbal clues to the strategy the student was such as length of time to answer, eye movements when strategising, and sub-vocalised counting were selected as important examples of what teachers should look for when interviewing their own students.

A powerful example of the importance of teachers looking for non-verbal clues is a year 10 girl whose verbal explanation appears to indicate she is using a Stage 5 Early Part-Whole method. To work out 47 + 8 the teacher shows her the problem written on a card and reads it:

You have $47 in the bank. You deposit $8. How much money do you have in the bank now?

The student says the answer is $55 within a second of the reading ending. Asked to explain she says:

I added 4. I just halved eight and just added each half onto the 47.

A cursory analysis of her thinking might indicate that this student was using part-whole thinking since she has split the eight into 4 and 4. Yet a sensible strategic part-whole split would be 8 = 3 + 5, because 47 + 3 = 50 and 50 + 5 = 55. The 4 + 4 split makes little sense indicating that the student might not have used a part-whole method at all. A close re-examination of the video clip shows that this is correct; while the teacher was not observing the student when starting to read the card the student immediately began moving her lips indicating that she was counting. A very plausible explanation of the student's method is that she was counting-on in two groups of four indicating she is at Stage 4 Advanced Counting (Table 1).

Strict protocols surrounded the creation then the use of the video clips. Parents, who gave written permission to video their children, were promised that the only people who could show the videos were facilitators for the NPs and mathematics education lecturers from the country's six universities. This was to assuage any understandable fears that that parents had that clips of their children might end up being shown on the Net.

The use of the video clips in professional development of teachers

Facilitators in the NPs had copies of the DVD that contained all the video clips. How they might use the DVD with teachers was variable across the six regions in which the NPs were delivered; due to this variability no attempt was made assess the effectiveness of the use of the clips. However, some evidence was available from the use of the clips with school principals.

In response to perceived failures in the education system in New Zealand in 1989 the Prime Minister led a radical devolution of decision-making power from the then Department of Education (DoE) to individual schools (Lange, 1989). Parent-elected Boards of Trustees (BOTs), which had principals as members ex-officio, now how much of the power that the regional Boards of Education and the DoE previously had. In the capital, Wellington, the DoE was replaced a much slimmer Ministry of Education (MoE) that had much reduced powers.

This devolution of power for the bureaucracy to the BoTs meant that any PD designed by the Ministry, as was the case in the NPs, could not be imposed on schools; the BoTs would decide whether or not their school would be involved. Of course principals are crucial in any decisions over involvement in PD as BoTs normally accept principals' recommendations for PD for their staffs

As part of the delivery of the INP groups of intermediate principals were brought together by the MoE for a two-day course. The essential feature of the NPs, namely the strategy framework was introduced to the principals using the video clips.

One principal, who was a member of the NP Reference Group, which met twice a year to review progress and make recommendations for future PD developments, noted this PD day had a significant effect on his decision for his school to be involved with the NPs:

While I was well disposed to the Numeracy Projects through my contact in the Reference Group it was this day that changed me from taking a benign interest to want positively to involve my school in the Numeracy Projects.

Watching the video clips was intriguing and interesting:

The video certainly kept my attention - but it would be wrong to say that I wanted my school to be involved just by watching the video - though, on reflection it was a significant part of a process.

Students were brought in from a local intermediate school. Watching a NP facilitator interviewing these students about their strategic thinking and then engaging in conversations after the students had left had an important effect:

We had the diagnostic assessment sheets, and we discussed which assessment sheet to use, and then what stage the students were at. I certainly was involved and interested - it had the ring of reality about it.

Principals were paired up in the afternoon and took turns at interviewing students:

I found the interviews very interesting. It reminded me of the reality of the classroom for my teachers. By the day's end I wanted my school in on the project.

Use of the Video Clips in Pre-service Teacher Education

Learning the mathematics pedagogy that is implicit in the NPs became a central part of mathematics education pre-service courses taught at the University of Auckland. The video clips are used in two ways:

- To help improve student-teachers' personal mathematical knowledge;
- To help student-teachers' learn how to conduct interviews in school to assess the strategic stage students were operating

The videos have had an important part in changing student-teachers view of the nature of mathematics. In particular the courses help to wean many of them off the algorithmic thinking they learned at school, and replace by using strategic mental processes. To this end student-teachers are shown video clips in lectures, then asked to explain how students solved the problems. For example, a video clip shows a year 7 student solving 403 – 97, which is written on a card and read to him:

A boy has $403 in his bank account. He takes out $97 to buy a new skateboard. How much does he have left?

Immediately the student says $306. He explains his reasoning:

- You go 90 minus 400 is 310;
- Then you would minus by 7, which is 303;
- And then you have got this little 3, and you plus it

Student-teachers are then asked to discuss this solution method – often many of them are initially non-plussed by the strangeness of student methods. They then discuss using better solution methods.

For example 403 minus 97 can be more efficiently calculated mentally with these steps:

- 403 – 100 = 303
- 97 + 3 = 100
- 303 + 3 = 306

In learning such mental techniques the student-teachers are encouraged to use materials as part of improving their own strategic methods; in this case a number line is ideal.

At the end of all courses students are assessed on their strategic ability in solving number problems. This is a high stakes assessment as failure means failing the whole course. This indicates the seriousness with which the University takes the issue of sending teachers into schools with sufficient content knowledge to teach mathematics well. Normally a content assessment in a course has 25 questions. This is typical question:

341 - ☐ = 299. What is the number that goes in the box? Explain your method

The correct answer with a correct explanation is awarded 1 mark. There are no half marks because they have been instructed not to use an explanation involving algorithms. So here the right answer, 42, with the use of an algorithm receives zero marks. However there a number of acceptable answers; the proviso is that it must be a part-whole method. For example a student-teacher might write:

- I transformed the equation to working out 341 minus 299
- I added 1 and 41 to get 42.

Simultaneously with the development of student-teachers mathematical content knowledge they interview students in schools to determine the stage of their strategic thinking (Table 1). To assist in learning to do this student-teachers are shown numerous video clips and asked to discuss what stage of strategic reasoning the students are using. Later student-teachers then report on their findings about the students that they interviewed.

This is followed by there is a high stakes assessment of students thinking involves showing four video clips that they have not seen previously. Here is typical question with model correct answers added in brackets:

The lecturer clicks the video on the Stage 5 clips, then selects Brian**.** The question reads: Write down notes on what Brian did and said.

(A typical Answer: The teacher says: How much is ninety-nine plus four more.

Brian, who in year 1, says: a hundred and three

The teacher says: How did you work that out so quickly?

Brian says: Because there is ninety-nine and four. I added on of a hundred and three for the hundred and three.)

The next question reads:

Question 1

Why is Brian at least Stage 5 "Early Additive Part-Whole Thinking"? Justify your answer.

(Typical answer: Brian broke 4 in to parts 3 and 1. He added the part 99 and 1 to give 100. He knew he had 3 more to add to this 100. According to the framework this is beyond counting. So he is at least stage 5. He may be stage six but this would require a more challenging question like 67 + 67 to determine this.)

The next question reads:

Question 2

Beth works out 7 + 9 is 16 very quickly. List three ways that she may have solved the problem using early part-whole (stage 5) methods.

(Answer:

Method 1:

7 + 9 is the same as 8 + 8 by adding and subtracting 1. Beth instantly recalls 8 + 8 = 16.)

Method 2

7 + 9 is the same as 7 + 10 – 1 which is 17 – 1 = 16.)

Method 3

7 + 9 is the same as 9 + 9 – 2 which is 18 – 2 = 16. Beth instantly recalls 9 + 9 = 18.)

Two types of answers were marked wrong. A number of student-teachers say Beth instantly recalled the answer to 7 + 9, but this receives no marks as it is not part-whole method. Some said Beth could have counted on from 10 to 17; this was excluded on two grounds, it is not a part-whole method, and it cannot be done very quickly. The next question reads:

Question 4

Another student, Josephine, is asked what 9 + 8 equals. She says 17 very quickly. Does this show that she is an early part-whole thinker? Explain.

(Answer: Due to the answer 17 being given quickly there are two realistic possibilities namely instant recall, which is nothing to do with strategic thinking, or an early part-whole method.)

While this was not asked in this question student-teachers have been taught to ask new questions like 47 + 8 that would effectively prevent instant recall but open up the possibility of a non-strategic algorithmic method.

Conclusion

The enhanced professional development model using interviewing and video clips has become part of the culture of facilitation in the New Zealand Numeracy Projects - new facilitators are inducted in to its use as a part of their training. Though this varies by region the essentials of teachers viewing video clips, watching facilitators model interviews, and then interviewing students themselves, now are an essential feature of the professional induction of teachers into the Numeracy Projects. This stems from initial evidence that teachers were usually unaware of the presence or the significance of students strategic thinking derived initially from the work of Steffe et al (1983), and that involving teachers with real children, both on video and by interviews, is a powerful first step towards raising this awareness and changing their practice in the teaching of mathematics. Subsequently, as part of the professional development offered for the Projects, a number of video clips of students was produced to show teachers what range of number strategic thinking they might expect in their classes and enable them to reflect upon and improve their teaching practices.

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Value orientation preference of children, adolescents and young adults via quantitative optics

Sirotova Mariana, Droscak Martin
University of Ss. Cyril and Methodius in Trnava, Faculty of Arts, Department of Pedagogy, Slovakia
mariana.sirotova@ucm.sk, martin.droscak@ucm.sk

Abstract: Value orientation has remained a valid issue of pedagogical theory. Along with other factors value preference significantly influences a human´s formation, his/her education and lifelong activity. It is therefore necessary to explore and based on the acquired knowledge to influence the formation of value orientation of children and adolescents also through the educational process of a school and through direct or indirect influence of a teacher. This article presents a quantitative view which subsequently allows for an adequate adjustment of further educational activity of a teacher or a school.
Key words: Teacher, children, adolescents, values, value orientation.

Introduction

In everyday life value orientation of adolescents is reflected in their opinions and attitudes towards themselves and toward their surroundings. It also influences their overall behavior and actions. The area of values and value orientation becomes urgent mainly in connection with an increasing rate of juvenile crime compared with the overall crime rate in a society, decreasing age of persons with socio-pathological behavior in educational environment of schools, in connection with a preference of materialistic and consumeristic way of life and with the crises of family. It is necessary to emphasize the importance of prevention of socio-pathological behavior and to say that this prevention is more effective and economical than an attemt to eliminate or fight against it. Therefore, every school and its educational influence plays an important role in the primary prevention and a teacher´s behavior itself and his/her influence becomes a preventive measure that could forgo delinquent development of our children and adolescents also through influencing their value preference and value orientation. "Following elementary moral qualities represent basic moral, universal and thus multicultural values: respect, generosity, compassion, pride, honesty, faithfulness, trust, consideration, solidarity, politeness, humility, tolerance, diligence, mutual help, obedience, friendship, truthfulness, broad-mindedness, decency, responsibility, self-control, ambition, patience, well-disposition, correctness and others (Žilínek, 1997, p. 45). A value orientation can´t be changed in a directive way. Teachers must identify themselves with positive values, believe in them and act accordingly. It requires a teacher who is able to present and motivate pupils and students toward respecting and asserting of all-human moral values.

Today, value as a term becomes one of the most complex and at the same time the most problematic notions. It is being continuously discussed in philosophy, psychology, sociology and pedagogy. At present, it is used as a conscious or unconscious category of the thing that is considered desirable in society, in relationships, in family and in education. P. Ondrejkovič (1998, p. 356) states that value "influences the behavior of an individual or a group as well as the whole societies, it is a source of motivation and preferences of action, mainly in cases of alternative behavior. Value is generally considered a relational category, most often a relationship between a subject and an object."

"The term value orientation principally means a tendency of a personality toward certain value attitudes" (Ondrejkovič, 1998, p. 197). The value orientation of a personality is reflected mainly in its actions and behavior. Through it we can assume an individual´s social role or status, his/her communication competencies, axiological processes and the degree of the development of personal competencies. Value and value orientation are closely connected with the axiological processes of a personality which couldn´t be detached from emotions and motivation. Value orientation manifests itself in the basic attributes of behavior: in motivation, readiness to act and in an act manifested in the activity itself.

Quantitative view of value orientation of children and adolescents

An educational process of any school plays an important role in the formation of value preferences and the value orientation of children and adolescents. If we want to effectively influence the process of its formation it is necessary to know the values that children prefer, the values they consider significant in different stages of their lives. Acquiring knowledge is, however, a complex process and it can be realized by using various methods and procedures. Ch. Peirce (in Chráska, 2007) introduces four basic methods of inquiry. The first is the method of tradition. In our lives there are many facts we consider true only because they were traditionally, arising from a historical concept, considered true in the past. By a frequent reproduction of these "truths" their validity has increased and it is often striking how many people insist they are true despite being exposed to new facts which

contradict the old ones. The second is the method of authority when a person accepts certain facts as true only because they are being presented by a person who he/she considers a reputable authority. Hence, "truths" are facts that are presented by reputable personalities of a society or are generally accepted by the public. Another method of acquiring knowledge is the method of priority where the criteria of true knowledge is its "compliance with the brain" assuming that humans are naturally drawn to the truth. The last is the method of science. If the human knowledge is acquired using scientific approach, we will formulate new facts which are, compared to the previous methods, independent from the personality, opinions and attitudes of the inquirer (the "a priori" method), from the set scientific theories (the method of authority) and from expectations (the method of tradition). Based on the above we can conclude that the inquiry of values and value orientation must also be approached in a scientific way. Pedagogical methodology offers three approaches - inquiry realizations – the quantitative approach, the qualitative approach and the mixed approach – the combination of methods and procedures of both approaches. Based on the issue at hand we chose the quantitative approach as we are interested in the meaning, the position and the role of education in the process of value formation and value orientation of children and adolescents. By using our research we were searching for answers to several questions relating to value preference of children and adolescents, their attitudes toward values and to the detection of the weight of motivational means – incentives aimed at the improvement of performance at socially beneficial work as educational process is reflected in the professional and personal feature of a human. Most of all we were interested in "What values do children, adolescents and young adults prefer these days"?

To obtain the quantitative view of value preferences, attitudes and motivational factors we chose a method of questionnaire survey. We used standardized questionnaire of J. Vonkomer (2002). The questionnaire is named HO-PO-MO (first two letters of Slovak words hodnota = value, postoj = attitude and motivácia = motivation – translator´s note) and it serves as the means of finding out value orientations, attitudes towards values and performance motivators. It enables detection and deeper understanding of the direction of a personality´s activity. The questionnaire consists of three relatively independent structures. Due to the limited scope of this study we are going to include only the results of the "HO" structure which offers information about preference and value orientation of an individual. It shows the level of: a/ educational value orientation, b/ esthetic value orientation, c/moral value orientation, d/ economic value orientation, e/ social value orientation.

The administration of the HO-PO-MO questionnaire was realized by the members of the organizational team in years 2011 – 2012. To ensure higher return of questionnaires the administration was realized in groups directly in the selected educational institutions. Oral instructions during introduction of the questionnaire as well as the presence of administrators not only improved the return of the questionnaires, but also prevented wrong and incomplete filling of the questionnaires. In total 959 respondents filled the HO-PO-MO questionnaire. Based on the type of questions the respondents were divided into three categories. The first category – children - consists of respondents of elementary schools. The survey was realized in three basic schools and in total 325 questionnaires from pupils of the second level of basic schools were collected. The second category, high school students, consists of students of secondary grammar schools and vocational high schools. In total 321 high school students in all four years of study filled the questionnaires. The last category consists of university students. 321 students in the bachelor level of study studying the Teaching of Academic Subjects returned the questionnaires. Our concentration on future teachers was intentional as this occupation plays an important role in the forming of value orientation of children and young people.

We sorted out the marked responses according to categories and processed them mathematically in order to get answers to the formulated questions. We were mainly interested in the value preference of children, adolescents and university students these days. Through the "HO" part of the questionnaire we obtained information aimed at recognizing the value orientation of children and adolescents. The respondents´ task was to write point values to alternative answers from 1 (the least important) to 5 (the most important). By calculating the average scores we found out which of the 5 categories of values were preferred by the respondents. These were:

Educational values - positive perception of education and knowledge as an important aspect of each individual´s life in existing social conditions and of his/her work and social self-realization that aims at ensuring an adequate quality of life.

Esthetic values – are characterized by the feel for beauty, by positive attitude toward art, by an attempt to develop one´s own abilities of making one´s life and one´s surroundings more beautiful, by development of culture and by conservation of the cultural and historical heritage of a nation.

Moral values – are oriented at an attempt of each individual to do good deeds, to be helpful, cooperative, are characterized by positive character traits, by the preference of fair and equal access of all members of society toward opportunities, by refusing corruption and promoting the dignity for all in everyday contact.

Economic values – represent an attempt to secure an adequate amount of financial means which leads to the fulfillment of material and mental demands; to a certain point there is an obvious preference of materialism and consumerism.

Social values – are connected with an active life in conditions of existing social environment, with an attempt to

deal with arising difficulties and with an interest in an adequate contact with others, with a high social feeling, empathy, altruism and a help to other members of a social environment.
In accordance with a Confucius saying that "one picture is worth a thousand words", we are going to present the collected value preferences in a picture form. Figure 1 shows the value preferences in the first category – the category of children.

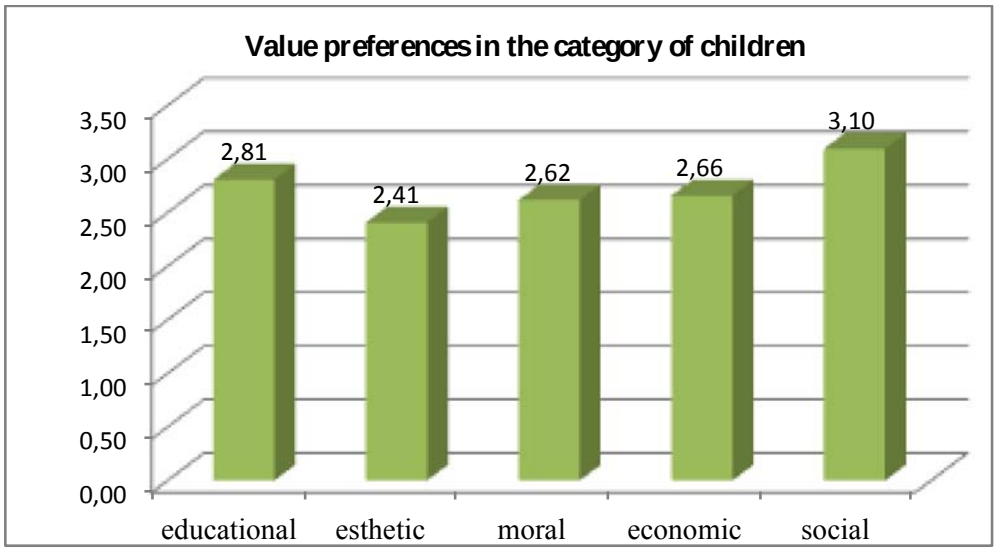

Figure 1: Value preferences in the category of children

The above figure shows that children prefer social values (3.10). We think that this preference is strongly influenced by the period of childhood when after "leaving" the family and entering the school environment children seek and enter into interpersonal relationships – friendships which are characterized mostly by a common activity. For older children (6. – 9. grade of elementary school) sharing common activity satisfies their need of belonging to a group and cooperating in a group. The preference of social values is also caused by a positive identification of a child with an authority – parent, teacher, other adult. We, of course, suppose that these authorities present the importance of social values in a human life. The second dominant category in the value preferences is the category of educational values (2.81). The importance of these values rises mainly when children realize the value of the educational process and its results presented in a final evaluation and in a monitoring process, but also when they reach higher levels of education as well as when they are motivated by parents who are interested in their children´s better professional future. Less preferred are economic, moral and esthetic values. Although we have expected the moral and esthetic values scoring higher even in this age group, we think that this is a result of a currently preferred need of attaining as high a standard of economic security for families and individuals as possible.

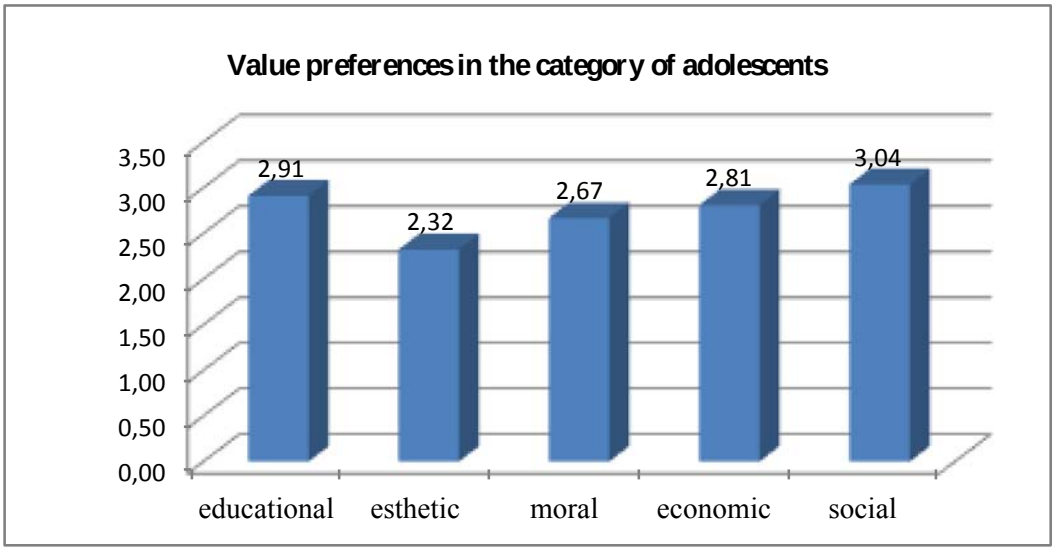

Figure 2: Value preferences in the category of adolescents

When compared with the value preferences of children we see a strong similarity. Adolescents also prefer social values (3.04) and educational values (2.91). Through relationships with their peers people in this age group satisfy certain basic psychological needs. These are the need of stimulation, orientation and meaningful learning as well as the need of emotional security and the need for knowledge. Therefore we think that the results of our survey were strongly influenced by the developing period of adolescence, but also by a positive influence of certain educational factors, mainly the personality of a teacher. The fact that educational values scored high is also probably caused (mainly in the final year of high school) by the increased feeling of importance of getting better education as a means of attaining higher professional role and social prestige, especially by continuing the education process at a university. The order of the other value categories is also a result of the influence of the surrounding society which displays a clear preference of materialism and consumerism mainly in media but also in human relations.

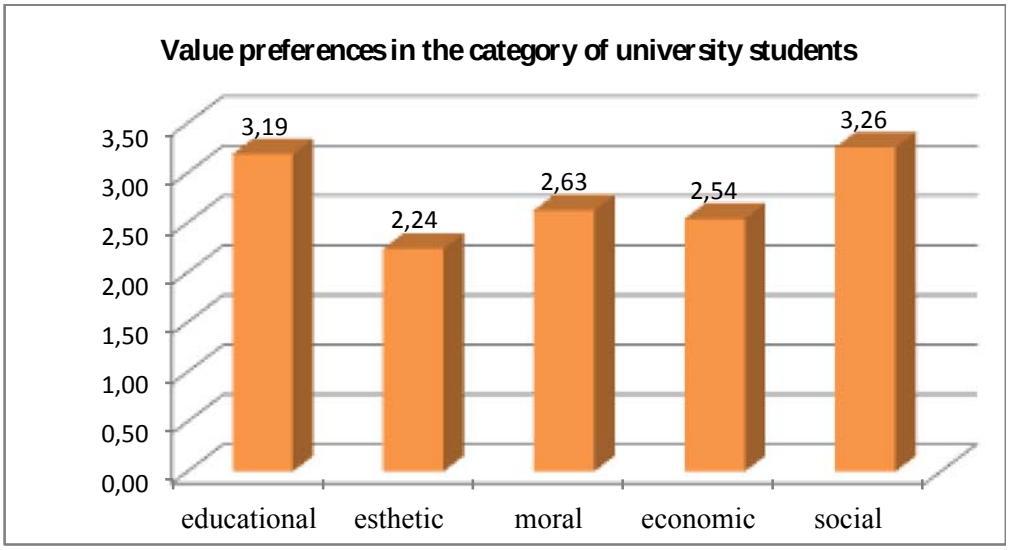

Figure 2: Value preferences in the category of university students

In contrast with the two previous categories in the category of university students we can see a shift in the preference of moral norms which score higher than the economic and esthetic values. Social and educational values reached the first and the second place, but with a smaller difference between them. The preference of social values is on one hand connected with the fulfillment of social needs by forming relationships and finding one´s own identity in a new social environment, where its members themselves are in new roles in which they need to perform and satisfy certain expectations connected to these roles. These expectations then result in the preference of educational values as the new role of a university student is a role of a studying and developing personality on its way to a professional readiness and future occupation. Similarly, we can assume that the preference of educational values is to a certain point connected with the motivation for the chosen subject of study. The choice of this particular study program also foretells the other value preferences, mainly the shift in the position of the moral values. Because we gave the questionnaire to future teachers it seems obvious that these individuals would prefer moral values to economic ones. It has become a generally accepted knowledge that teachers´ inadequate financial reward makes it difficult for these professionals to secure a high standard of living. The preference of moral values should be perceived as a positive sign as it leads to a higher standard of educational process and thus to a positive influence on the value formation of pupils.

Conclusion

An important finding resulting from the analysis of the value preferences is the fact that the values representing a humanistic and democratic orientation of a young person´s personality (social, educational and moral values) scored highest in our survey. It is thus apparent that families and schools educate children and the young along the lines of democracy and humanism. We should however ask questions like why is juvenile crime on the rise or why are certain social-pathological behaviors (bullying, drug addiction, aggression etc.) becoming more common in our schools? The answer isn´t a simple one, but we think that there is a strong influence of the media, information –communication technologies, unfairness and disrespect of human life which children often encounter in a social environment and a failure of communication and interpersonal relationships. It is also possible that respondents answered in a way which they thought was expected of them and thus presented their views in a rather distorted

way. Nevertheless, what remains an important fact is that the orientation of young people to social, educational and moral values is an asset for the whole society and its development.

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