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The International Journal of Educational Administration and Policy Studies (ISSN 2141-6656) is published monthly (one volume per year) by Academic Journals.

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Anatomy of pay in decentralisation by devolution in Tanzania

King Norman A. S.

University of Dodoma and University of Iringa, United Republic of Tanzania.

Received 3 January, 2018, Accepted 2 March, 2018

Decentralization has become an eminent discourse for boosting people’s participation in decision making. Arguably, one of the pillars to boost good governance. Nevertheless, various levels of governance, which have resulted from decentralisation by devolution have varied perspectives on rewards for the work they perform especially the lowest namely village and ward levels. The contestation is on who deserves to receive payment for the elected posts. There are diversified opinions on the matter. Some opine that councillors, deserve more pay for their exertion. On the other hand, some opine that village chairpersons deserve pay for their work. Some people opine that both councillors and village chairpersons deserve pay. Hence, the main objective of the study is to find out which cadre deserves more attention to payment between the ward councillor’s and village chairpersons. This is a case study design which focused on Hai district in Kilimanjaro. The literature has employed interview as the major information collection strategy. Observation and documentation were used as supportive strategies. The sample was drawn through purposeful sampling from four wards, which is 100% of the sample with which the chairpersons are also the councillors in Hai district. The analysis of information has utilised descriptive analysis, which is cemented on logical reasoning of the contents. The research has concluded that 100% of the respondents were in favour of a village chairperson to be paid than a councillor. In addition, it was evident that village chairperson work is more tasking than councillors.

Key words: Decentralization, devolution, councillors, village chairman, development.

INTRODUCTION

Development of the world over is the ambition of all types of government. People work hard, strategize on various ways of ascendency, and create institution of governance and management with the ultimate goal of attaining development. It is from such perspective countries have opted for the best way of enabling the people to participate in decision making, hence decentralisation as the first stage and devolution as the second. Norman and Massoi (2010) sought to explore the extent in which D-by-D has been implemented at the grassroots level with concentration on people’s involvement in planning process. That means to see the extent at which individuals at grassroots level are involved in the preparation of the strategic plan and see whether the human resources at grassroots’ level have the capacity to undertake planning process.
This seems to be one of the key studies on the decentralization and devolution (Research Gate, 2016). The study by Norman and Massoi (2010) has been cited by 7600 scholars for the year 2015/2016 (Research Gate, 2017). However, the contestation on who deserves payment in local government authorities which are the pillars of decentralization has never been covered or sought to be of paramount. This study researches on the opinion of those in the field of councillors and chairmanship who served concurrently. Seeking opinion is sometime vague due to pretence. Nevertheless, seeking opinion on natural course of action suggest factual response.

Decentralization is highly linked with local government system and has been practised in the country in varying degrees since colonial times (Ngware and Haule, 1992). Historically, the concept of decentralization has never been a new concept in countries across the globe (Massoi and Norman, 2009; Othman and Liviga, 2002). The term attracted attention in the 1950s and 1960s when British and French colonial administrations prepared colonies for independence by devolving responsibilities for certain programs to local authorities. In East Africa, decentralization has equally become an axiom following what is perceived the failure of the top down approaches to development and demand for new approaches. Hence, decentralization came to the forefront of the development agenda alongside the renewed global emphasis on governance and human-centered approaches to human development in the 1980s. Discourse on decentralization in the 1980’s associated decentralization with increased citizen’s participation in decision making process. Today both developed and developing countries like Tanzania are pursuing decentralization policies. It is very evident that top down cannot be said to have failed nations all over the world. But tunes and rhythms depend on how each country carried the practice. For example, China is heavily practicing centrally planned economy, but with proper machinery of identifying needs of the people in every community through sound research. Most African countries have been carried with the decentralization by devolution. At times the challenge could be who are the lower echelon leaders, such as councilors and village chairman? Do mandates vested to them equal the responsibilities? Is the quality of education they have attained suggests ability to deal with the problems the societies face? Is the pay rendered to the leaders suggests reasonable pay? These and many other questions suggest that there is still more room for researches to give a proper value of decentralization and more importantly devolution. This master piece of literature tackles in a nutshell on the importance of payment to this elect office with the view to compare the roles of the two cadres: councilors and village chairpersons.

In most African countries particularly, after independence that is from 1961 to 1980, some developing countries set out ambitious social and human resources development plans including programmes generally aimed at the eradication of poverty, ignorance and diseases in a matter of two decades (Nyerere, 1967; Norman, 2003; Mmari, 2005). Currently, countries such as Kenya, Uganda, Rwanda, Ghana, Canada, Nigeria and Brazil are practicing decentralization by devolution. The degree of autonomy may differ but at least they are similar but not the same, they differ because these countries vary. The utterance of culture, traditions, presence or absence of colonialism, traits of former regimes, and type of religion or religions could setup a vivid variation among the nations, hence the extent of decentralisation and thus devolution. Some challenges that faced Tanzania include how to properly serve the people with education facilities such as schools, health centres and water facilities. Therefore, the first president of Tanzania Julius Nyerere felt the easiest way to coordinate the people for development was to create a room for being together and thus do away with people living in their clans, hence, villages were formed for the purpose of serving the people. In 1972 to 1975, it was a period of forming villages (Max, 1991; Norman, 1998; URT, 2003).

To date, it is felt that Africa has always seen decentralization as an ideal approach to rural and urban development (Ngwilizi, 2002; Nelson, 2000). While central government administrative structures improved through these decentralization initiatives, actual participation by the rural and urban populace in the development process was not realized. This type of decentralization was more of deconcentration than devolution of power through local level democratic organs. Tanzania's ongoing administrative, political and economic reforms of early 1990’s demanded effective decentralization in which the involvement of the people directly or through their democratically elected representatives is given paramount importance.

Objectives of the study

The main aim of the study was to find out which cadre deserves more attention to payment between the councilors on one hand and village chairpersons on the other hand.

Specific objectives

(1) Classify the tasks of councilors and village chairperson
(2) Investigate relevance of payments for the councilors and village chairperson
(3) Propose ways of improving the decentralization and local government cadres.
Questions for the study

(a) Is there relevance of payment for the councilor’s and chairperson’s work?
(b) Given the two cadre of work (counselor and village chairperson), which job do you consider more tasking?
(c) You are a counselor at the same time you are village chairperson, given a mandatory choice, which work would you advice the government to append payment?
(d) What are the reasons for the option you have made?
(e) What are the functions of the councilor and village chairperson?

The rationale of the study

The study provides an important piece of literature in regard to importance of financial rewards of the two cadres of job, namely councilors and village chairpersons. It further provides a policy guide on which job is more tasking than the other through research and thus make necessary decision on who should be paid and reasons for such a pay. Finally, it provides proper value of the work we do.

LITERATURE REVIEW

Several authors have made their work known in decentralisation and devolution area. The list is huge. However, those who have indicated the importance of decentralization include (Max, 1991; Massoi and Norman, 2009; Lukamai, 2006; Ronald, 2005; REPOA, 2008; Fisher, 2008; TREECARE, 2006; Forje, 2006). While the list is huge, but literatures that have sought to cover for the extent of deservedness of pay are limited. There is another set of literatures which provides guidance to manage decentralization and the functions thereto. The list include publications with the government of United Republic of Tanzania (URT), which are (URT, 1996; URT, 1998).

There are several reasons for backing decentralisation. From democratic point of view, decentralisation allows practicability of people choosing their own leaders; hence, whether the leaders are weak or strong the tag is on the people who elected them. From institutional point of view, decentralization allows formalization of institutions that facilitates management of the people at the grassroots level. It is easy to say we want to have dispensaries in every village because of decentralization. We set up primary schools in every village because of decentralization.

Further, from governance point of view, decentralization allows governments to append resources for security and piece; development plans and so forth. Hence, decentralization is vital for the development of the people. From social and economic perspectives, this simply means that through decentralization, opportunities are created for the people at the grassroots to be part of the highest political, administrative, legislative, planning and budgeting within their localities. In Tanzania, the local government is the largest employer. This automatically boosts the velocity of money through what is paid to the workers. Normally people do not consume notes or coins but they consume the values appended to the coins and notes through purchasing goods and services.

From education perspective, decentralization infiltrates knowledge to the people through practising management and governance. People meet in their village government committees, they table agendas, discuss matters that the societies face, they do prioritization and suggest solution for each problem. This is a school by itself. People in these committees become leaders created by their own societies. No wonder some of these committee leaders are better than those with certificates known as degrees. Decentralization exposes people in a broader spectrum and removes mediocrity syndrome of leadership investing in certificates without practice.

Nyerere (1976) indicates that each person must be paid commensurate to work appended to him or her. King (2015) suggests that it is only competence based appointment, promotion and recruitment that will boost development. He adds that each personnel should be paid in accordance to his contribution to the society. King (2015) seems to be narrating that institutions should pay the ability of a person not a mere title. In other words, title should be granted to a person according to ability to contribute development to the society and thus payment as remuneration. Generally, decentralisation appeals for bringing government to the people.

Literally, vilagelization is a concept that was propounded in Tanzania, and when the purpose of vilagelization is examined, particularly when observing functions such as: (1) enabling people dwell together and make informed decision that are for the majority rather than of the few, (2) enabling people choose their own leaders at the level of 250 house hold (village) and execute the functions of the government at that very level, (3) enabling people exercise power of the central government at the grassroots level (village), and (4) enabling people make their preference in terms of economical, political and socially and move ahead towards the realization of the benefits of decision making and power utilization. One can be able to say the prominence of the so called decentralization; particularly in Africa it was indeed propounded in Tanzania and baptized a new name decentralization and later devolution. In the amplification of this study on decentralization, researchers have noted that China had village establishment policy of about 30 years before Tanzania attained her independence in 1961 (Msekwa,
2010; Norman, 2010). In this vein, it can be added that certainly Nyerere learned the importance of vilagelization, decentralization and finally devolution in China as he was a dear friend of Chairman Mao the then president of China.

That is why, some authors feel that decentralization and devolution may occur at the same time, it is quite possible to decentralize administrative functions without devolving the power to make meaningful decisions (Massoi and Norman, 2009; Fisher, 2008).

Although most authors (Max, 1991; Boon and Jong, 1991; King, 2012; Norman, 1998; Mollel and Tullenaar, 2013; Green, 2015) seem to link devolution with the transfer of power to the local authorities, yet what happened in Tanzania is the transfer of authority from the central government to the local government, enabling the later to pursue all matters regarding social, economical and political development which were formerly being done by the central government. For example, before devolution the mandates to determine collection of revenue on various agricultural products were vested on the central government but after the reforms which paved a way for devolution the mandate has been shifted to the local government authority up to the village level.

Hence, it can be narrated that decentralization by devolution means transfer of authority- functional responsibilities, and resources to all local government levels. This is geared towards making them largely autonomous, democratically governed and deriving legitimacy through service they deliver to people in accordance to grassroots level dwellers’ priorities as communicated to government decision-makers (URT, 2004; Bonna, 2005). From the definition, it can be reiterated that the focus of the law and regulations governing decentralisation by devolution focused on Mtaa level (in case of urban authority and village in case of rural authority) due to the fact that these are the lowest level of authorities within the structure of local government, hence, making it possible for the participation of the people at the grassroots. While the essence and the importance of decentralization are clear, yet the attribution to the payment of leaders of lowest levels is arguably hence this study.

MATERIALS AND METHODS

This is a case study design, which has employed a qualitative approach to finalize the research work. In depth interviews were the leading information collection strategy. Observation and documentation acted as supportive measures. The data were collected at Hai districts in Kilimanjaro region. The information was collected using purposeful sampling as only leaders who served concurrently as village chairperson and ward councillors were involved in the study. In Hai district, there were only four villages which had their chairpersons elected as councillors.

Hence, the sample was 100% of the respective population. The target interviewee was those leaders who concurrently held positions of councillors and village chairmen. Further, interviews were made to those who either served one at a time as chairman later as councillor. The reason for such sample was to eliminate pretence. The sample was small but from people who are practicing and thus stood the best position to opine on who deserves pay and who do not. Hence, the total sample was four wards, which happened to have leaders on both categories. The chairpersons/ councillors who were involved in the study are of villages (with names of wards in brackets) namely Roo (Masama Mashariki), Shirimgungani (Mnadani), Kware (Masama kusini) and Longoi (Machame wereweru). The content analysis is employed to come up with the conclusions.

FINDINGS

The findings of this imperative study are provided here. In this study, the responses have observed the logicality of the questions put forward for the study. The study has set cognovits of respondents as R, and thus R1 means the first respondent in the series of interview. In addition, R2 means the second respondent in the series of interview. The content analysis is employed to set up the conclusion. Therefore, in this part responses are captured per question. Nevertheless, the main objective of the study is to find out which job among the two, namely, village chairperson on the one hand and the ward councillor on the other hand, is more tasking and thus deserves pay comparatively. Hence, the conclusion has taken care of the total responses of the respondents, without deviating from the objectives of the study.

Regarding the first question, is there need for payment of salary or any allowance for the councillors work? Responses indicate that indeed there is. In this question, all respondents indicated the need for the pay. Hence, 100% of the respondents were in favor for paying allowances to the councillors. Here, allowances refer to payment appended on event, in this regard on meetings as scheduled by the District Executive Director or of similar stature pending the type of the local government council. While salary refers to formalized payment paid on every month irrespective of event/meetings.

Regarding the corresponding question on whether village chairperson deserve pay or any allowance? Also, all respondents were in favor for the payment of the village chairpersons. What is noted during the two corresponding questions is that on the need for payment of village chairpersons the gist for the respondents was of the opinion that village chairperson work needs salary and not a mere allowance. R1, had this to say, “I serve as a counselor and as village chairman but sincerely, with councilor’s work, I just attend the meetings at the headquarter of the council that is all. With chairman of a village work, meetings are many in numbers than those at the councilors. The meetings at this stage are problem solving meetings, yes more than 90% are problem solving meetings. No rest at all.”

R3 had this to say, he seemed amazed when the
researcher posed this question. "Look village chairman is everything in this community. I walk up in the morning every day to supervise projects that we implement at this level. I must organize meetings to provide feedback to the people regarding the use of funds remitted to us by the central government, donors, and even the local government council. When roads are bad, complaints go to the village chairman and may be the member of the parliament, nobody complains to me as a counselor. It could be, but rarely". This response seems to be covering question 3, which sought to know which job is more tasking between the two cadres.

Question 3 sought to know which work is more tasking. All the respondents affirmed that village chairperson’s duties and responsibilities were more than those of a ward councilor.

Question 4 is comparative in nature. It sought to know which work deserves payment had there been a choice of one, among the two cadres. This again had a similar response for all respondents. To them, there seems no even need for comparing as one is too heavy as compared to the other. R2 had this to say, "It is even not right to compare the two cadres. The government has not sought to know. I guess, if your research is government sponsored, they should know that village chairperson does more work than anyone in the village. You cannot compare with village executive nor the councilor".

R4, added that, "from ensuring peace and tranquility, development of infrastructure, electricity, health centers, and schools in both primary and secondary much as they are in your village, the responsible person is the village chairman. In this regard payment must be made to the chairperson of the village".

Question 5 intended to find reasons for question 4. There are several tasks that were put across. Nevertheless, it is summarized as village chairperson are the supra in the development programs of a village. It is village chairperson who ensures that peace is maintained. R3, had this to say, "the village chairperson emphasize on volunteerism on village development activities such as breaks preparation, household contribution to village projects, and awareness creation for villagers on matters related with health, economy and general welfare of the society. Any activity that needs volunteerism is subjected to the village chairperson".

Question 6 purported to know the functions of the councilor from perceptual and practical point of view. Just like members of parliament, the main functions of the councilor are narrated as making bylaws, debating bills, and passing budgets of the councils. The general comments of the respondents were that, councilors attend meetings in the council headquarter and in their committees, that is all. R2 adds that, 'we are not disregarded as poor performers because they know we pass the budget at council level and the priorities are made at council level. Nevertheless, at village levels, chairpersons of the villages need to make priorities, which will then be discussed at Ward Development Committee (WDC), which I being the councilor, chairs. Even in this WDC, we indulge into discussing the programs of villages, which have been literally brought by village chairpersons while assisted by the village executives. I am just a coordinator, chairing village businesses.'

Question 7, was similar with question six as it sought to know the functions of the village chairpersons. The functions of the village chairperson are stipulated in the law. However, this study eludes the deep praxis of the functions as opined by those who practice it. Generally, the respondents indicated that a village chairperson is responsible in the persecutions and fortunes of the village. "When something go wrong, the complaints are availed to the chairman of the village, but when things are right heroes go to all the villagers" narrated R4.

DISCUSSION

It is important to reveal here that all respondents held posts of councilor and chairperson of the village concurrently. They were elected as village chairmen a year before contesting the seat of a councilor. The interviewees were seconded into the office for the second time prior to contesting the seat of councilor. All were in office for six years as village chairperson prior to contesting. This provides another important piece of information as far as orientation on the two works is concerned. They were elected in office as village chairmen in 2004 for the first time, and were re-elected in 2009. In 2010 they contested for the seat of councilor and won. Thus, they became councilors after having served as chairperson of the villages for at least six years. When the interview was conducted they had both at least two years’ experience as councilors and seven years’ experience as village chairpersons. The opinion thus is of paramount as they emerge from the people practicing the two cadres of work. This study does not intend to dilute the responsibilities of the councilors, rather it calls for thorough research for governments to engage elites who are professional in problem identification and solving prior to making decisions. No doubt, village chairperson, according to what they perform in their daily activities suggests payment of salary to be appended to them.

The articulation made by respondents is that one can decide not to attend the meetings of the council but he cannot abscond the meeting of the village. One can decide not to participate in the council committees but cannot abscond the programs of the village. The development programs of the village require the chairperson to be there all the time. From reporting the revenue collection, expenditures, progress of the various projects of the village which include schools, dispensaries,
bridges, houses, agricultural implements and so forth, they require time and mental work of the chairperson. It is noted in the findings part, that all respondents had the view that councilors can be paid allowances pending the meetings they attend at the headquarters of the council. They further add that village chairperson deserve salary as their work require day to day time.

Conclusion

It is evident now to conclude that the two cadres of elected namely councillors and village chairpersons are crucial in the episode of development of the communities and thus our countries. Indeed, both require some packages of facilitation in the discourse of implementing their work. However, the study has revealed that the tasks performed by the village chairpersons are incomparable. Indeed the councillor chairs the Ward Development Committee (WDC), and also ought to represent the views of the people at the council level. The responsibilities of the councillors are group responsibility; it includes attending the meetings, debating bylaws and budgets of the council among others. Presence or absence of a councillor does not render any decision to be forfeited. People of the ward cannot tell if the councillor attended a meeting or not. The cause is different when the gauge is made to the village chairperson. The responsibilities and tasks of the chairman of the village are solely at personal level. All villagers would be aware of the presence and absence of the chairman. It requires the chairman in the initiation of the development projects of the village, setting priorities of development programs, monitoring the projects to completion, and intervening development priorities such as health, education, water and agriculture. It has been noted that 100% of the respondents are of the view that village chairman work is more tasking compared to councillors and thus deserve pay in the form of salaries or allowances that comprehend with the village executive officer or more.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES


Research Gate (2016). Research Gate for Academicians. Google, RG.


Printers, Dar es Salaam.
Population and Housing census, Volume II. Age and Sex Distribution,
Full Length Research Paper

Universal basic education (UBE) policy implementation challenges: The dilemma of junior secondary schools administrators in Nigeria

Aja S. N.¹, Egwu S. O.¹, Aja-Okorie U.¹, Ani T.² and Amuta N. C.¹

¹Department of Educational Foundations, Faculty of Education, Ebonyi State University, Abakaliki, Nigeria.
²Department of Educational Foundations, Faculty of Education, Naval University, Asaba, Nigeria.

Received 29 March, 2017, Accepted 25 May, 2017

The study examined the challenges hindering implementation of the universal basic educational (UBE) policy in Nigeria. The study is a descriptive survey research. The population of the study comprised all the two hundred and twenty one principals in Ebonyi state public junior secondary schools. Proportionate stratified random sampling technique was used to select 100 principals for the study. Instrument used for data collection is a researcher-structured questionnaire. The instrument was validated by three experts. Two from Educational Administration and Planning and one from Educational Measurement and Evaluation options Department of Educational Foundations and Science Education respectively in the Faculty of Education University of Nigeria, Nsukka. The reliability of the instrument was determined using split-half test method and computed with Cronbach Alpha which yields a coefficient of 0.82. The data collected were analyzed using means scores and standard deviation. The findings of the study revealed that politics; inadequate funds, poor planning and bureaucratic red-tape syndrome constitute challenges to the implementation of UBE policy in Nigeria. Based on the findings, it was recommended that successive government should consolidate on the existing policy plans for sustainability as well as strengthen the (PRS) units of both universal basic education board (UBEB) and ministry of education (MOE).

Key words: Universal basic education (UBE), policy implementation challenges, Nigeria public junior secondary school administrators.

INTRODUCTION

Education in Nigeria as well as world over has been adopted as instrument par excellence for economic growth and national development. That is why the national policy on education in Nigeria was emphatic that education is no longer a private enterprise but a huge government venture that has witnessed a progressive evolution of government complete and dynamic intervention, and active participation (FRN, 2004).

The national goals as articulated in the Nigeria’s national development plan of 1970s and enshrined in the National Policy on Education were to be achieved using education as the driving force. Since then, Nigeria...
government has been making concerted efforts to actualize these objectives through many failed educational policies and programmes such as the universal primary education (UPE) scheme, early child care development and education (ECCDE), nomadic and almajiri education programmes. It is part of the efforts that the universal basic education (UBE) programme was launched in 1999. It is regrettable that for over 50 years of self-rule in Nigeria, she is still battling to improve her education system in spite of several technical and financial assistances from international organizations like the United Nations Education, Scientific and Cultural Organization (UNESCO), United Nations Children’s Education Funds (UNICEF) and World Bank.

All this while, there is no doubt that Nigeria formulate very sound policies in education similar to what is obtainable in advanced countries like Britain and United States of America but one will be tempted to ask why her education system is still at a very low level going by the 2013 report of National Assessment of Learning Achievement in Basic Education conducted by Universal Basic Education Commission of general poor pupils and students performance in all subjects which were attributed to short in supply of instructional materials, poor school environment among others.

This has made many education observers and practitioners to believe that the major problem facing education in Nigeria is not the absence of informed, rational and thoughtful educational policy, but the lack of political will on the part of those charged with the responsibility of supervising the implementation of these policies (Akindutire et al., 2011). What is on the lips of many well-meaning Nigerians is why are education policies in Nigeria not well implemented before formulating and or introducing a new one.

The concept of policy

Policy is an official statement of government intentions on different sectors of government. It is the activities involved in getting and using power in public life and being able to influence decision that affects a country or a society (Asamonye et al., 2015).

This implies that policies take long processes to be formulated, decided upon, adopted, implemented, violated, evaluated, revised and rescinded. For instance, the national policy on education which provides the principles, guideline, programmes, persons, contents, methods, supervision and evaluation of in-put/output process to achieve educational goals in Nigeria did not spring up overnight. It came into being as a result of many conferences and high powered committees that brainstormed to put together what we know today as a National Policy on Education (NPE) which has been revised in 1981, 2004, 2008 and 2013. It is in this regard that Okunamiri (2010) defined educational policies as course of action recommended and adopted by the leaders (government agents, political power?) as expedient or essential to the issues and problems of education which may take the form of ordinance, code, edict, decree or law dependent on the type of government in place.

In the same vein, Osokoya (2011) stated that educational policy is the statement of intentions of the government and the envisaged means of achieving those aspects of its national objectives that have to rely on the use of education as a tool. The concept of educational policy therefore denotes the determination of major educational objectives, the selection of methods of achieving and the continuous adaptation of existing programmes to the problems that face a government.

Education policy in the context of this study can therefore be described as the collection of laws and rules that govern the operation of an education system. It encapsulates a government’s expressed intentions and official enactments, as well as its consistent patterns of activity or inactivity. Bolaji et al. (2015) opine that education policy intends to bring to life the perspectives, realities and tools for negotiating the political order of education in order to effect the desired improvement in the education system in line with the changing society. It is the ambition of politics that develops policies which means that politics shape the policies in education. Every government desires to make basic education accessible to all citizens that is why the UBE programme was introduced in Nigeria.

Concept of Universal Basic Education (UBE) in Nigeria

The UBE programme is an education policy formulated to represent Nigeria government strategy for achieving Education for All (EFA) accord. Okoro (2010) described UBE programme as an expression of the strong desire of the government to eliminate illiteracy by raising the level of awareness and general education opportunities of the entire citizenry in Nigeria. The objectives of UBE as contained in the UBE Act 2004 are to:

(1) Develop in the entire citizenry a strong consciousness for education and a strong commitment to its vigorous promotion;
(2) Provide free, universal basic education for every Nigerian child of school going age;
(3) Reduce drastically the incidence of drop-out from the formal school system (through improved relevance, quality and efficiency);
(4) Cater for the learning needs of young persons, who for one reason or another, have had to interrupt their schooling, through appropriate forms of complementary approaches to the provision and
promotion of basic education;
(5) Ensure the acquisition of appropriate level of literacy, numeracy, manipulative, communicative and life skills as well as the ethical, moral and civic values needed for laying solid foundation for life-long learning.

The aforementioned Act also provided the legal framework for the implementation of the UBE programme but despite all these arrangements, the programme is yet to be fully implemented after nineteen years of its launching in 1999. The question in everybody’s mouth is what was actually wrong? Although education is generally supposed to be separated from politics but it is impossible to separate politics from education because it is the political agenda of the government in power as presented to the State and National Assemblies that shapes the policies government adopt to achieve educational objectives of state and federal governments.

Policies are made by people’s representatives in the government for the career civil servants to implement under their supervision. It is this background that politics has been conceived as a struggle for who gets what? It is because politics has to do with lobbying processes for resources control and or allocation in any given time and place. Adie et al. (2015) saw politics of education as a complex inter-relationship among interest groups across the education structure who wants to serve particular goals or needs to suit the interest of the government in place. The story is the same at all levels of education, and junior secondary school is not an exception.

Junior secondary schools are institutions controlled and managed by the government through the universal basic education board (UBE) to provide education to those who have completed primary education, and prepare them for higher education and or useful living. Although education is in the concurrent list in the constitution of the Federal Republic Nigeria, all public junior secondary schools except unity schools are within the purview of the state government that notwithstanding, it is the National policy on Education that gives direction to all levels of education.

Every public junior secondary school is headed by a principal usually referred to as school administrator because he/she is charged with the responsibility to ensure the realization of the educational objectives at that level. People are supposed to be appointed by the State Universal Basic Education Board (SUBEB) to the position of a principal based on experience and sometimes through quota system. This basically accounts for the differences in the managerial ability of the principal vis-à-vis the school performance. It is the responsibility of the state government through the appropriate Agencies, Boards and Ministry of Education to initiate policies and programmes that will enable her achieve the objectives of UBE in junior secondary education in their respective states. This accounts for the differences that are observed in the area across states and even within a state.

Overview of policy implementation in Nigeria

It is understandable that every government that comes to power has its own political agenda which shapes social programmes, governance structure and public institutions. These are accompanied with changes invariably seen as policy change which sometimes are changes made in order to alter the political balance of power or even exercise political coercion to manoeuvre opponent.

It is worthy to note every level of education in Nigeria has its own fair share of these political intrigues; that is why Imam (2001) noted that the effect of change in government (which brings about changes in policy) on the goals of education and mobilization of resources is a proof to ineffective implementation of various programmes canvassed for by the National policy on Education, and has relegated hopes and optimism to the back-state. The gap that often exists between policy formulation and implementation calls for inquiry to identify factors that constrain the effective implementation of educational polices especially at the junior secondary school level.

Okojoma (2001) in his study on the evaluation of the 3-3 aspect of the National policy on education observed that the following factors have hindered effective implementation of the policy. They are:

(1) Inadequate qualified staff
(2) Inadequate physical facilities/equipment
(3) Insufficient funds, and
(4) Non-availability of guidance and counseling services corroborating these findings

The Department for International Development (DFID) report according to Yakwan and Alagi (2015) noted that secondary schools in Nigeria operate in a very challenging environment, with two few qualified teachers, poor infrastructure and unpredictable state of funding all contributing to poor learning outcomes for students in secondary education.

Similarly, Yakwan and Alagi (2015) identified poor communication process, capability problem and dispositional conflicts as general explanations for unsuccessful implementation of educational policies and programmes. It is on this back-drop that Yakwan and Alagi (2015) averred that politics of the nation Nigeria over the period of democratic rule has hindered a holistic policy implementation model for the collective interest of Nigerians, and observed that major education
stakeholders are not involved in the formulation of education policies but are left to implement the policies without the needed resources. They also noted that saddling politicians who have little or no knowledge in educational management with the responsibility of education policy formulation and corruption at all levels have taken their toll on the challenges to the implementation of educational policies and programmes in Nigeria.

Lending voice on the challenges to effective planning and implementation of educational policies and programmes, Nwankwo cited in Ekechukwu (2016:10) maintained that planning and implementation of educational policies in Nigeria is faced with many challenges among which includes:

(1) The cart before the horse syndrome
(2) Dearth of reliable statistical data
(3) Population explosion
(4) Depressing economy
(5) Bureaucracy
(6) Inadequate finances
(7) Inadequate qualified manpower and political instability.

In the same vein, Okoroma (2006) identified planning with unreliable data, lack of political will, insufficient funds and corruption as the major hindrances to the implementation of educational policies in Nigeria. Yawe (2015) gave the following reasons for planning in education they are:

(1) To clearly identify and define the desired end results of educational operations
(2) To ensure that limited educational resources are rationally allocated among the various competing educational demands and programme
(3) To ensure that educational interests, needs and demands of various interest groups like students, staff parents and members of the school community are harmonized with those of the society
(4) To achieve the national objectives of education, and
(5) To avoid wastages by providing just the type and quantity of educational service needed in the society (p.13).

He noted that policy implementation in Nigeria is a problem due to different conflicting factors resulting from poor policy planning; although planning comes first before policy formulation but proceeds implementation. Unfortunately, educational policy plans and goal attainment have been irrevocable due to implementation constraints. It is against this backdrop that Okoroma (2006) maintained that the problem of policy implementation is traceable to the planning stage which comes immediately after policy formulation. She noted that good planning that can facilitate effective implementation ought to consider such factors as the planning environment, social, political, financial and statistical problems. Adzongo and Agbe in Yawe (2015) observed the following factors as constraints to educational policy implementation in Nigeria and they include:

(1) The nature of the economy
(2) The non-economic factors (culture and tradition, attitudes etc)
(3) Tiers of government
(4) Availability of resources
(5) Public pressure
(6) Ambiguity or lack of specificity in policy directives and frequent changes in policy as a result of change in government.

Furthermore, Louis et al. cited in Ekechukwu (2016) pointed out that extensive bureaucratization and foisting hierarchical reporting relationship characteristic of bureaucracy most of the time stifle timely dispensation of duties which invariably delay actions on government policies and programmes in education. Bureaucracy is a system of administration characterized by specialization of functions, adherence to fixed rules and hierarchy of authority usually represented by civil service not elected representatives (Merriam, 2018).

In Nigeria today, the political influence in the education policy issues has negatively impacted on the civil service system that is regarded as a contemporary institution with the purpose of creating an efficient way of organizing public organizations. In numerous instances, many policies have been marred by poor implementation strategies emanating from bureaucratic procedures due to overbearing political influences.

The bureaucrats (civil servants) in the civil service sometimes out of frustration and in defense of their office, device a way of placing obstacles on the policies that are formulated by political officials especially for policies they have contrary views or those that are not of direct benefit to them.

Similarly, Bolaji (2014) contended that the relationships between the bodies of UBE policy implementation in Nigeria are not consistent with the realization of education outcome as it relate to the implementation of basic education policy because of the issue of control. He noted that there is no clear unambiguous and explicitly stated bureaucratic roles defining the agencies of implementation (SUBEBs and MOEs) in the states with regard to UBE implementation.

The Nigeria’s EFA Development index is less than 0.8 that is why Nigeria is ranked 132 out of 133 countries of the world on the level of implementation of basic education and this scenario has been attributed to government rhetoric without will power (Bolaji, 2014).

Generally, corruption and unethical behavior among
public and civil service officials has been alluded as a serious impediment to implementation of education policies in Nigeria (Ezekwesili, 2013). Having reviewed the opinions of scholars on the implementation of educational policies in Nigeria especially the UBE, it is the desire of this study to critically look into the challenges to the implementation of UBE policy in Nigeria and its implications to educational planners.

Statement of the problem

With the introduction of the UBE policy in Nigeria since 1999 to ensure unfettered transition of pupils from primary to junior secondary school, the programme seem not to be fully implemented. Many children are still seen roaming on streets of major cities, towns and villages without being in school. Private primary and secondary schools still flourish despite the exorbitant fees they charge.

Poverty is still ravaging in many families which have resulted to incessant cases of child labour, abuse, abandon and or trafficking. World Bank (2008) UBE assessment report placed the Nigeria's EFA development index at 0.8 which means that Nigeria ranked 132 out of 133 countries involved in the study on the level of implementation of basic education.

A cursory look at all these aberrations to the aims and objectives of the UBE programmes one will be left with no doubt that something is wrong somewhere. It is on the basis of these that the problem of the study is posed as a question thus: what are the challenges hindering the implementation of the Universal Basic Education (UBE) policy in junior secondary schools.

Research questions

The study is set to achieve its purpose by answering the following research questions:

(1) How does politics constitute challenge to implementation of UBE policy in Nigeria?
(2) How do funds affect implementation of UBE policy in Nigeria?
(3) How does planning affect implementation of UBE policy in Nigeria?
(4) How does bureaucracy affect implementation of UBE policy in Nigeria?

METHODOLOGY

The study is survey research designed to examine challenges facing implementation of Universal Basic Education (UBE) policy in Nigeria. The population of the study comprised all the two hundred and twenty one principals in Ebonyi State public secondary schools.

Ebonyi state was chosen because it is one of the educationally disadvantage state in Nigeria. Proportionate stratified random sampling technique was use to select 34, 35 and 31 and principals from Abakaliki, Afikpo and Onueke education zones of Ebonyi state. This gave a total of one hundred respondents as the sample size, representing about 45% of target population.

Researcher-structured questionnaire was used as instrument for data collection. The instrument was validated by three experts: two from educational Administration and planning and one from educational administration measurement and evaluation options all from University of Nigeria, Nsukka. The instrument contained twenty questionnaire items with four point rating scale as response options thus: strongly agree (SD) -4 points, Agree (A) -3 points, Disagree (D) -2 point and strongly disagree (SD) – 1 point.

The decision rule was gotten using the mean of the scales thus: 4 ÷ 3 ÷ 2 ÷ 1 ÷ 4 = 2.5, which is therefore the criterion reference point at which to accept or not accept an item as agree or disagree. The reliability coefficient of 0.82 was obtained with Cronbach alpha using split-half test method. The researcher administered hundred copies of questionnaire to the respondents with help of three research assistants and collected same after completion which ensured 100 percent return. The data collected were analysed using mean scores and standard deviation.

RESULTS

The results of the data collected from the study were presented on the table and analysed as shown below.

Research question one: How does politics constitute challenge to implementation of Universal Basic Education (UBE) policy in Nigeria?

Table 1 shows that the respondents agree with all the items were perceived influence of politics on implementation UBE policy. This can be seen from the item means which ranges from 2.6 to 3.25. A grand mean of 2.94 and standard deviation of 1.08 indicates normal spread of the scores.

Research question two: How do funds affect implementation of UBE policy in Nigeria?

The data on Table 2 reveals that all the items were agreed by the respondents as perceived influence of funds on the implementation of UBE policy. This is evident from the means which ranges from 2.50 to 3.05. A grand mean of 2.71 and standard deviation of 1.01 shows that the scores are well spread.

Research question three: How does planning affect implementation of UBE policy in Nigeria?

Data analysed on Table 3 indicates that the respondents agreed with all the items as perceived influence of planning on the implementation of UBE policy. Mean scores of the items which ranges from 2.65 to 3.30 with a grand mean of 2.99 and standard deviation of 1.06 are glaring proves of the spread of the scores.

Research question four: How does bureaucracy affect
Table 1. Mean rating of respondents and standard deviation on how politics constitute a challenge to implementation of UBE policy.

<table>
<thead>
<tr>
<th>Item statement</th>
<th>X</th>
<th>SD decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government in power appoint people who are not professional to be in-charge of school regulatory bodies</td>
<td>2.90</td>
<td>1.46 Agree</td>
</tr>
<tr>
<td>Successive government abandon policies and programmes of her predecessors for a new one</td>
<td>3.25</td>
<td>1.60 Agree</td>
</tr>
<tr>
<td>Most polices are formulated protect the interest of the government power instead of to address problem of common good</td>
<td>2.90</td>
<td>0.94 Agree</td>
</tr>
<tr>
<td>Politicians influence the day to day activities of school administrator s and teachers who implement policies</td>
<td>2.60</td>
<td>0.3 Agree</td>
</tr>
<tr>
<td>Conflict interest by political parties affect implementation of educational, policies in public secondary school.</td>
<td>3.05</td>
<td>1.11 Agree</td>
</tr>
<tr>
<td>Grand mean</td>
<td>2.94</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Table 2. Mean rating of respondents on how funds affect implementation of UBE policy.

<table>
<thead>
<tr>
<th>Item statement</th>
<th>X</th>
<th>SD decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many educational policies are abandoned due to inadequate funds</td>
<td>3.05</td>
<td>1.37 Agree</td>
</tr>
<tr>
<td>Government most of the time formulate educational policies without adequate financial provision for its implementation</td>
<td>2.50</td>
<td>1.93 Agree</td>
</tr>
<tr>
<td>Most funds appropriated for the implementation of educational policies are mismanaged by corrupt government officials</td>
<td>2.60</td>
<td>0.3 Agree</td>
</tr>
<tr>
<td>Funds meant for the implementation of educational policies are sometimes diverted for electioneering purpose</td>
<td>2.50</td>
<td>0.5 Agree</td>
</tr>
<tr>
<td>Over dependence on federal allocation as sole sources of funding education affects policy implementation</td>
<td>2.90</td>
<td>0.94 Agree</td>
</tr>
<tr>
<td>Grand mean</td>
<td>2.71</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Table 3. Mean rating of respondents on how planning affect implementation of UBE policy.

<table>
<thead>
<tr>
<th>Item statement</th>
<th>X</th>
<th>SD decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning with inaccurate statistical data affects the implementation of educational policies</td>
<td>3.0</td>
<td>1.12 Agree</td>
</tr>
<tr>
<td>Unrealistic school census figure adversely affects the implementation of educational policies</td>
<td>2.65</td>
<td>0.45 Agree</td>
</tr>
<tr>
<td>Use of non professionals in planning for education affects implementation of educational policies</td>
<td>3.05</td>
<td>1.15 Agree</td>
</tr>
<tr>
<td>Allocating educational resources without proper school mapping affects the implementation of educational policies</td>
<td>2.95</td>
<td>0.99 Agree</td>
</tr>
<tr>
<td>Poor technological knowhow to obtain relevant statistical data for educational planning hinder implementation of educational policies</td>
<td>3.30</td>
<td>1.57 Agree</td>
</tr>
<tr>
<td>Grand mean</td>
<td>2.99</td>
<td>1.06</td>
</tr>
</tbody>
</table>
Table 4. Mean rating of respondents on how bureaucracy affects implementation of UBE policy.

<table>
<thead>
<tr>
<th>Item statement</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delay as a result of following strict rules affect implementation of educational policies</td>
<td>2.20</td>
<td>0.78</td>
<td>Disagree</td>
</tr>
<tr>
<td>Non cooperation of the subordinates in carrying out instructions affects the implementation of educational policies</td>
<td>2.40</td>
<td>1.69</td>
<td>Disagree</td>
</tr>
<tr>
<td>Blind submission to rules and regulations as principles of bureaucracy affects implementation of educational policies</td>
<td>2.90</td>
<td>1.25</td>
<td>Agree</td>
</tr>
<tr>
<td>Lack of clear job description/assignment affects implementation of educational policies</td>
<td>2.75</td>
<td>0.46</td>
<td>Agree</td>
</tr>
<tr>
<td>Poor flow of communication as a result of rigid bulk pass hinder implementation of educational policies</td>
<td>2.50</td>
<td>0.55</td>
<td>Agree</td>
</tr>
<tr>
<td>Grand mean</td>
<td>2.55</td>
<td>0.95</td>
<td></td>
</tr>
</tbody>
</table>

political instability, ideology and will affect educational policies and programme implementation in River state of Nigeria. On how funds affect implementation of UBE policy, it was observed that availability of funds has a direct bearing on effective implementation of UBE policy in Nigeria’s junior secondary schools.

Collaborating this finding, Adie et al. (2015) observed that politicization of education funding in Nigeria has seriously affected the access and quality of secondary education in Cross River state of Nigeria. This implies that an adequate fund is a prerequisite to effective implementation of UBE policy in Nigeria’s junior secondary schools.

Finding on how planning affects implementation of UBE policy in Nigeria’s public junior secondary schools in Ebonyi state shows that planning plays an important role in ensuring effective implementation of UBE policy. It was gathered that planning with inaccurate data; improper school mapping and poor technological know-how to obtain relevant school data hinder effective implementation of UBE policy.

This finding is in line with Okoroma (2006) where he identified that planning with unreliable data is one of the major hindrances to the implementation of educational policies in Nigeria. The finding on how bureaucracy could pose a challenge to the implementation of UBE policy in public junior secondary schools reveals that excessive red-tape syndrome affects implementation of Universal Basic Education policy.

In support of this finding, Louis et al. cited in Ekechukwu (2016) opined that extensive bureaucratization and frustrating hierarchical reporting relationship characteristic of bureaucracy most of the time stifle quick dispensation of duties which invariably may affect actions on government policies and programmes in Nigerian education. By and large, strict application to rules is not bad as a principle of bureaucracy but hiding under the cover of rule to delay necessary actions becomes a challenge to timely dispensation of duties needful for the realization of educational policies considering the fact that education is a social service-oriented.

Conclusion

The focus of this study is on the challenges of UBE policy implementation in Ebonyi state public junior secondary schools. The political terrain in Nigeria vis-a-vis the states has not been conducive enough to give room for steady implementation of educational policies because every successive government (military or civilian) always wanted to be identified with new policies thereby abandoning the existing ones. Most of the time policies are changed and funds meant for them wasted. Some of these policies are formulated hastily without proper planning simply to favour political interest and sustainability dashed to the wind. Worst still formulations of these policies are bestowed on political office holders who are inexperienced thus making it difficult for them to monitor the implementation of these policies. Here, the career civil servants who were not involved at the formulation stage stifle their implementation through unnecessary bureaucracies.

RECOMMENDATIONS

Based on the findings, the following recommendations were made:

(1) Every successive government should always endeavour to consolidate on the existing policies by providing adequate funds for sustainable implementation:

(2) The planning, research and statistics units Education Boards and Ministries of Education units should be strengthened through capacity building for effective operation as this will help provide government with necessary data planning.

(3) Government should ensure that appropriate measures are put in place for adequate income generation and disbursement to education in order to guard against abuse.

(4) Finally, role conflicts through duplication and
unnecessary bureaucratic bottle necks involved in decision making should be lessen by making use of committees as these will go a long way in ensuring that policies are effectively implemented at all levels of the education system in Nigeria.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES


Bolaji SD (2014). Intent to action: Overcoming the barriers to universal basic education policy implementation in Nigeria. Adoctoral thesis submitted to the graduate research school of Edith Cowan University, Western Australia.


Comparative investigation of alternative assessment methods used in Turkey and United States elementary 4th grade mathematics curriculum

Mehmet Demir1*, Cynthia, A. Tananis1 and Uğur Başboğaoğlu2

1Department of Curriculum and Instruction, Collaborative for Evaluation and Assessment Capacity, School of Education, University of Pittsburgh School of Education, University of Pittsburgh, Pennsylvania, USA.
2Department of Curriculum and Instruction, Faculty of Education, University of Inonu, Turkey.

Received 30 April, 2018; Accepted 20 June, 2018

This study investigated the applicability of alternative assessment methods used in 4th grade mathematics curriculum in Turkey and the United States with the intent of implementing these methods more effectively in elementary schools. The sampling included six elementary schools with twelve teachers in Adıyaman in Turkey; four elementary schools with twelve teachers in Pittsburgh, PA in the U.S. Qualitative data were gathered through document examination semi-structured observation, and semi-structured interviews; they were analyzed qualitatively. Findings indicated a similarity in the foundational resources used in both mathematics curricula. The observations revealed that although both groups of teachers professed using the assessment methods, teachers in the U.S. applied the methods in their classrooms, while teachers in Turkey did not. The interviews disclosed factors preventing the application of alternative methods, particularly among Turkish teachers, including time, the availability of other methods, and the enormous pressure to “teach to the test.”

Key words: Alternative assessment, mathematics, curriculum, elementary school.

INTRODUCTION

Learning theories such as constructivism, multiple intelligences and project-based learning have deeply affected traditional teaching, learning and assessment theories as well as their applications (Fourie and Van Nierkerk, 2001). One of the reasons for evaluation and improvement of teaching, and learning theories is that the meaning and the scope of the definition of learning have shifted (Shepard, 2000). This shift involves a different approach to every stage of the learning and teaching process (Daghan and Akkoyunlu, 2014), including a new approach to assessment (Letina, 2015).

The learning is a life-long process, which in turn makes instruction more student directed. This calls for students who have better problem solving, critical thinking, synthesis, analysis, as well as creativity to be successful (Whiteford, 2014). In addition, students’ ability to self-evaluate has increased; this in turn demands alternative forms of assessment to assess both learning process.

*Corresponding author. E-mail: mdemir@pitt.edu.

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and outcomes (Dochy, 2001).

In the recent decades, there has been a significant change in the selection and usage of tools for assessment in learning process. The paradigm of assessment in schools, colleges and universities has been shifted from traditional methods to alternative ways (Kalra et al., 2017) and they are relying less and less on traditional paper-and-pencil tests and developing creative ways to assess the learning of their students (Ling, 2016). Traditional methods merely evaluated students with a teacher-centric approach that was largely opaque to students. Newer approaches to assessment do not simply determine whether a student knows something or not; ideally, assessment reveals much deeper aspects of the learning process, and should enable students to explain, apply, critique and self-monitor (Janesick, 2001).

In response to requirements for reformed assessment, alternative assessment methods have come into play. Thus, alternative assessment methods should be used instead of traditional assessment for providing every student with the best learning opportunity "If we truly believe in inclusion and diversity, which builds on the understanding that everyone is capable of learning and worthy of the best possible investment in his or her education, it becomes unsustainable to continue using an assessment model that has traditionally developed to focus on selection, certification and accountability" (Buhagiar, 2007).

LITERATURE REVIEW

Alternative assessment (AA) is an umbrella term for a variety of nontraditional assessment methods, including classroom-based, informal performance assessment and authentic assessment, portfolio assessment and project-based assignments (Gill and Lucas, 2013; Lee et al., 2012). AA is based on a constructivist view of learning; viewing learners as active constructors of knowledge and supplying responses rather than selecting or choosing (Dogan, 2011).

Therefore, alternative assessment has the potential both to reverse student passivity, replacing it with initiative, self-discipline, and choice, and to promote compassion, vision, trust and spontaneity in students (Janisch et al., 2007). AA was developed "as a result of lacking tools that can show students’ real improvement and their strong strides, and the dissatisfaction of implementers about prevalent assessment tests" (Balliro, 1993).

The traditional way of assessment is not really efficient for many reason and it focuses on students’ knowledge and skills (Foufa, 2016), however, AA focuses on students’ learning strategies, problem solving, and task completion, using direct and holistic measurements of what students know (Wiggins, 1990). Moreover, alternative assessment uses activities that discover “what students are able to do with the knowledge and skills obtained through learning”, emphasising their abilities and strengths instead of focussing on their weaknesses and what they do not know (Oliver, 2015).

As in other disciplines, assessment in math is the primary factor in determining what students understand, as well as what and how they are learning (Hemje, 2014); whether or not they have accomplished the learning goals (Hanifa, 2017). Moreover, it provides teachers an insight into the success of teaching strategies and students’ preference of learning styles (Damon, 2017). This focus on assessment helps educators with the development of mathematics instruction and allows for more holistic measurement. Using alternative assessment methods provides a more comprehensive picture and more authentic information about learners’ knowledge, skills, attitudes, and competences which are developed during the teaching process (Letina, 2015).

This paper focuses on AA in elementary mathematics in the United States and Turkey. Many studies have shown that elementary teachers in Turkey are still using traditional methods in teaching (Köklükaya, 2010; Karakus, 2010) despite the change in public education policy in 2005. These methods demonstrate basic mathematical knowledge but do not assess higher order-thinking (Dandis, 2013). This study compared the use of alternative assessment methods in 4th grade mathematics classes in Turkey and the U.S. The U.S. was chosen as a comparison due to its history and commitment to increasing the use of alternative assessment methods through public education policy. From this study, we draw recommendations for improving the use of AA in mathematics curriculum in Turkey and answer the following research questions:

(1) What are teachers’ opinions about applicability of alternative assessment methods used in 4th grade mathematics curriculum in Turkey and in the U.S?

(2) What are the alternative assessment practices suggested by curriculum materials used in the 4th grade mathematics curriculum in Turkey and in the U.S?

(3) What type of alternative assessment methods exist and with what frequency are they being used in the 4th grade mathematics classrooms curriculum in Turkey and in the U.S?

METHODOLOGY

Research design

The case study method was used to broadly determine relevant circumstances and to offer solutions related to those individual cases focusing on a single unit with a restricted milieu and discipline (Merriam, 2013). The case study method employs a descriptive, holistic, exploratory, and inductive research method (Rossman and Rollis, 2017) that helps to produce a highly readable narrative that can be used by decision makers and information users (Patton, 2015). By applying this method in two specific
countries, difficulties and barriers that the schools and teachers confronted were highlighted and the frequency of which alternative assessment methods appeared in the documents used in educational settings was determined. We also collected more detailed information through classroom observations and teacher interviews to describe the relationships between what was being said and what was actually happening in classes and the opinions of teachers about the use of alternative assessment methods.

Setting and participants

Maximum variation sampling was used for this study because it constitutes a relatively small group and reflects the maximum degree of diversity (Patton, 2015). Twenty-four 4th grade teacher participants were included in this study. The sampling consists of six elementary schools with twelve teachers in Adiyaman in the southeast region of Turkey and four elementary schools with twelve teachers in the city of Pittsburgh in the Western region of the state of Pennsylvania, in the U.S. In this context, the Adiyaman schools (two teachers from each level) and Pittsburgh schools (three teachers from each level) were grouped based on their general levels of academic success: successful, average and low. A framework was designed according to the use of internal criteria of three data collection methods: Document examination, semi-structured observation, and semi-structured interview. Experts in educational studies from Turkey and the U.S. were consulted to ensure on the final forms of the data collection methods. Additionally, the interview questions were piloted with volunteer teachers in both countries to improve clarity and usability, and were adjusted accordingly. Finally, University of Pittsburgh Institutional Review Board (IRB) granted certification in order to fulfill the ethics of the research and its methods and to promote fully informed and voluntary participation.

Data collection

Multiple data collection tools provide an opportunity to cross-check the validity of several themes that emerge during the qualitative research approach. As Yin (2014) points out that the case study’s unique strength is its ability to deal with a full variety of evidence-documents, artifacts, interviews, and observations beyond what might be available in a conventional historical study. Therefore, document examinations, semi-structured observations, and semi-structured interviews were conducted to determine and compare the level of applicability of alternative assessment methods in 4th grade mathematics courses.

The document examination method provides records of activity that researchers cannot observe directly (Stake, 1995). This study collected and reviewed the 4th grade mathematics curricula teacher guidebooks, mathematics textbooks, student workbooks and other resources in Turkey and the U.S. The study identified which assessment methods were being used and what materials, if any, could guide teachers in terms of their use such as directions for the instructor or rubric samples, etc.

The observation method provides an opportunity to see what is transpiring in the classroom to gather additional information about a phenomenon that cannot be achieved in the other methods of data collection (Corbin and Strauss, 2015; Yin, 2014). The researcher conducted the observations in the classes to describe the type and frequency of alternative assessment methods used in mathematics lesson. The researcher also identified difficulties experienced during the implementation of these assessment methods in the mathematics lesson, and if there were difficulties, what measures were taken by the teachers. Over a two-month period, each teacher was observed for 3 weeks. The observations were carried out unobtrusively in the classroom.

Semi-structured interviews are conducted with participants in order to reveal their ideas, perspectives, beliefs and understandings that complement the document examination and observation methods (Merriam, 2013). The interview defined similarities and differences among alternative assessment methods regarding mathematics curriculum. The researcher created interview questions in advance, and allowed adjustment on the questions during discussion in order to provide flexibility for interviewees. The interviews were implemented by the researcher in two 25 to 30 min sessions, all of which were recorded and later transcribed.

Research procedure and data analysis

The qualitative data collected through document examination, semi-structured observations and semi-structured interviews were analyzed and coded for recurring themes. The researcher used a grounded theory model, allowing the codes to emerge through the data analysis (Rubin and Rubin, 2012). The grounded theory approach assumes that coding, recognizing concepts and themes, and theory development are parts of one integrated process (Rubin and Rubin, 2012). Content analysis was conducted to describe further themes and subthemes that emerged from the interviews, observations, and document notes. A codebook was developed, revised and refined accordingly. The researcher manually coded the categorization process by transferring the emergent themes and organizing them according to the research questions and major themes. The analysis was conducted on twelve participants for Turkey and the U.S., but the frequency is greater than twelve in some because some participants provided more than one reason. The observations and interview data were represented using narrative descriptions which involved a ‘detailed discussion of several themes (complete with subthemes, specific illustrations, multiple perspectives from individuals, and quotations) all of which provided a more profound understanding of the previously collected inquiry data (Creswell 2014, p. 189). To distinguish among quotations from teachers in the two countries we used the label ‘T’ and ‘U’ to refer to Turkey (T) and the U.S. (U).

RESULTS

Semi-structured interviews data

The first research question addressed in this study is:

‘What are teachers’ opinions about the applicability of alternative assessment methods used in 4th grade mathematics curriculum in Turkey and in the U.S.?’

The participants of the semi-structured interviews were asked several questions relating to practices of alternative assessment methods currently being used in their classrooms. They were also asked additional questions probing more deeply into the current use of these methods. Data were coded into multiple themes falling under the general heading of teacher opinions about the applicability of assessment methods. From here, multiple themes emerged, including information resource, teachers’ proficiency, applicability, difficulties experienced, modifications, obstacles, advantages, recommendations, frequency and familiarity.
Information resources

The participants were asked what sources of information about alternative assessment methods they used in their teaching. Information resources were grouped into three subthemes: curricular materials, internet and friends. According to Turkish participants’ responses regarding basic sources, the participants used teacher guidebook (n=11), textbook (n=8), private resources (n=6) and the curriculum (n=1). Internet resources included general education websites (n=9), such as ‘egitimhane’ (n=4), ‘vitamin’ (n=2), ‘sinifogretmenibiz’ (n=2) and ‘morfakampus’ (n=2). With regard to friends, the participants consulted their coterie of friends (n=6) and colleagues (n=2). One of the interviewees said that he examined the curriculum to find ways to apply the methods better, and he utilized the basic resources like the teacher guidebook, textbook, etc. The interviewee pointed out that he initially tried to use these resources, but could not find what he was looking for, so he turned to other resources because:

“The guidebook and the other basic resource are insufficient in terms of examples and information, so I turned to using the internet and additional resources. I googled the related topic on the internet regarding assessment examples. I also used the other resources because they enabled us to find some examples of assessment (T1).”

In regard to the U.S. participants’ responses on basic sources, the participants used the curriculum (n=12), teacher guidebook (n=12), textbook (n=12), everyday mathematics student math journal (n=5) and articles (n=1). With regard to the internet, the participants used google (n=11) and online teacher group (n=1). As to the subtheme of friends the participants consulted their mathematics colleagues (n=1). One of the participants who used these resources said the following:

“We use Everyday Mathematics, a primary resource from Chicago University. In that curriculum there are alternative ways of assessing student work: Books, portfolio, rubric, problem solving. Davin Williams, the book’s author, has a lot of practical ways there as well. So I would not say I use [only] primary resources, but other things online, different blogs. But I have not used additional resources on alternative assessment. A lot of things come from the curriculum and also some were created from the district. We have Everyday Math, and Envision. We put those together to manage the curriculum. From those resources the important thing is, I am researching, looking, and creating on my own (U10).”

Teachers’ proficiency

The participants were asked whether they had enough information about alternative assessment methods or not. Among the Turkish participants, five stated that they had enough information, four had partial information, and three participants stated that they did not have enough information about the methods. As for the U.S. participants, six stated that they had enough information, three had partial information, and three had no information about the assessment methods. Some of the Turkish participants who answered ‘enough information’ explained that they had done research on the assessment methods, and they had in-service courses and experiences with the methods. Others answered ‘enough information’ because their interest in math motivated them to search for more materials. Still others answered ‘enough information’ because, as those who were responsible for applying the alternative methods, and they were naturally more aware of the methods, and could make important inferences about implementing them. For example, one participant commented:

“Yes, I think I have enough information because it is based on my being a researcher and having more responsibility. No seminar or course were offered on these assessment methods, and I was asking the inspectors when I was doing research on the methods, but they did not know about them, either. Therefore, I realized that if I wanted to know about the assessment methods, I would have to find out by myself (T9).”

The American’s teachers, on the other hand, while giving similar answers in same ways, differed in other important ways. American teachers who answered ‘enough information’ was similar to the Turkish teachers: some of them did their own research; gained knowledge from experience/applying the methods; had in-service and course; and some had sufficient resources about the assessment methods as well as they were educated at the university about the methods. One participant added,

“I feel like I learn in my course work at University of Pittsburgh about all of these assessment ways to check to see if the students learn math. My information is probably from my course work, and I also have been teaching for six years. We are doing assessment in class modeled after assessment that we did at the university. The instructor told us how we should do the assessment (U11).”

Regarding the subtheme ‘partial information’, the participants from Turkey stated that they had partial information because they were in the dark; they could not follow the improvements; had inadequate experts, lack of personal endeavour, and practice; and they wanted to stick to traditional assessment methods. As distinct from Turkish participants, the U.S. participants stated that they have ‘partial information’ because they did not feel the need for all of the alternative assessment methods, and they were intimidated by their complexity. Corresponding
to 'lack of information', the Turkish participants complained about the lack of university training on the alternative methods as well as the lack of in-service seminars and courses, equipment, and professional support. In regard to the U.S. participants’ responses on 'lack of information', the participants stated that they did not have enough information because of lack of knowledge, inability to practice the methods, and they were accustomed to traditional methods.

The applicability

Each semi-structured interview participant was asked to reveal information about the applicability of alternative assessment methods. According to two Turkish interviewees, the methods were ‘applicable’, while four interviewees said that the methods are ‘partially applicable’, and six interviewees stated that they were ‘not applicable’. As for the U.S. interviewees, eleven expressed that the methods were applicable and only one of the interviewees reported that he had no idea about the methods. Regarding the subtheme ‘applicable’, the Turkish participants stated that the assessment methods were applicable providing that certain conditions were met. One of the interviewees explained:

“I think all of these methods are applicable in case of number of students, level of the students, and enough equipment. If the teacher is a little eager, willing to make sacrifice, preparing the forms for assessment before class, these methods can be applicable very easily and so they are beneficial (T11).”

As for the U.S. participants, they stated that the assessment methods were applicable because the methods enabled teachers to learn more about the students, allowed students to use their knowledge, increase their confidence in math, and motivate them in the course. These methods are also applicable for students of different levels, and accurately measure students’ knowledge. Furthermore, teachers feel capable of carrying out the methods. One of the interviewees explained why the assessment methods are applicable in the following way:

“I think that you need to find out what the students know. If you are giving the test, and they are failing it, but everyday they are right with you in class, raising their hand and getting everything right, you need to find another way to assess them. When you are saying alternative assessment, so I should use them, absolutely. When we are working together, I see what they are doing and they can tell me what is the community property, and I said, ‘Ok, you know what you are talking about’ because they show it. They are intelligent kids that are failing the paper and pencil test (U5).”

Corresponding to the subtheme ‘partially applicable’, the Turkish participants pointed out that the assessment methods were partially applicable owing to time and cost constraints, too many methods, lack of expert support and detailed information, crowded classes, teacher workload, and differences in students’ levels. The Turkish participants gave diverse reasons for why alternative assessment methods were ‘not applicable’ including similar reasons to those expressed earlier, as well as traditional parental expectations, lack of equipment and physical conditions, and the curriculum intensity.

Difficulties experienced

Participants’ responses about difficulties they encountered in the implementation of the alternative assessment methods in their classrooms were categorized as environmental difficulties, difficulties regarding teacher, student, and parents, and curricular difficulties. Regarding environmental difficulties, the majority of participants indicated that crowded classes, insufficient time, and the exam system hindered the implementation of assessment methods. With regard to teacher difficulties, some participants complained that the methods were not found in the curriculum; their workload was too high; they had insufficient support and information; and they were reluctant to change. Student difficulties included level differences, lack of information, and indifference. Curricular difficulties included the intensive curriculum and methods pertaining to the math curriculum; parent difficulties included cost, parental pressure on doing test instead of doing alternative assessment, and lack of knowledge, as well as bias about their children’s level.

“The number of students in the classroom makes it difficult to implement the methods. The resources also did not include enough information, or you could find only one or two examples, so they were certainly insufficient. The methods are costly, and the parents rejected them because there were too many assessment methods (T8).”

According to the U.S. participants’ data, within the theme ‘difficulties’, specific subthemes emerged including environmental and student difficulties. Each subtheme was categorized into the following dimensions: the environmental difficulties were coded into time factors, testing and subjectivity; the student difficulties were coded into level differences among students, collaboration, insufficient information and attitude.

“Some of the alternative assessments are subjective. What I think as a math teacher may be different than another teacher even if we use the same rubric. I can think one way and the other teacher could think another
way, so just having different teachers, with different points of view on implementing the alternative methods that we use, that may be a difficulty (U4)."

Modifications

To ’what kinds of modifications would you make on how to assess learning in 4th grade math classes? ’ A majority of both Turkish and American interviewees wished for changes in alternative assessment methods. However, one distinct difference in two groups was that while the Turkish participants focused on changing actual assessment methods, such as constructed grid, diagnostic tree, and portfolio. One of the interviewees pointed out that he would like to discard these assessment methods because

“I do not know them, so I have no information about them. Therefore, I would like to extract them. I tried to use portfolio, but I could not adopt it because the kids put everything into the portfolio (T10).” Presumably, the portfolio was too messy to find what the teacher was looking for.

Curiously the American participants’ answers seemed to have little to do with actual assessment methods. Rather, answers focused more on teaching strategies, such as problem solving instruction, an increase in growth assessment, and end the standardized testing. One of the interviewees said:

“I would like to try to teach more problem solving, not say here learn this, this and this. Our curriculum does not give them problems. Ask them to understand something. I would really like that, maybe it should be more like that (U3).”

Obstacles

From the semi-structured interviews, the following subthemes emerged as obstacles in both Turkey and the U.S.: environmental factors, application difficulties, and challenges arising among both students and teachers. In addition, Turkish teachers also identified insufficient support as an obstacle. This difference stemmed from Turkish teachers’ cultural reticence to make use of online resources. One of the Turkish interviewees commented on insufficient support as an obstacle in implementing alternative assessment methods:

“Despite profuse compliments, like “Good job!” we cannot get enough support from the experts, inspectors, and counselors. We have no expectations for support, but I think it is one of the most discouraging points (T1).”

Other obstacles included environmental factors, such as insufficient time, differences in learning levels and crowded classes; assessment difficulty, overwhelming variety of methods, insufficient information on those methods, meager equipment, and a scarcity of examples in the teacher guidebook. The U.S. interviewees reported obstacles such as insufficient amounts of time, high costs, unclear curriculum, the pressure to teach to the test, difficulty of data collection, inadequate knowledge of assessment, and the variety of student behaviors and performance levels. One of the interviewees called teachers themselves as an obstacle. This is because many teachers are accustomed to traditional summative assessment tools such as quizzes and tests. One teacher explained this by saying:

“They [teachers] do not have much background with alternative assessment. They often try to document grades they can easily record in their grade books rather than perform alternative assessments on a regular basis where new forms of assessment help to guide classroom instruction. Many worry about assessment but do not apply the results of that assessment to shape future work. They don’t consider the results of the assessment as a template necessary for structuring where the students need to go next (U10).”

Advantages

Considering the advantages of alternative assessment methods, according to Turkish data, the majority of participants indicated that the methods increased interest and motivation towards the course, improved self-confidence, and enhanced a sense of responsibility and a feeling of success. Some of them stated that the methods developed higher-order thinking skills, enriched creativity, improved students’ research skills, as well as provide objective evaluation. A minority of participants specified that the assessment methods reduced exam anxiety, provided permanent learning and critical thinking, and improved democratic skills. According to the U.S. data, majority of the participants explained that the methods revealed the level of knowledge, provided real evaluation data, improved self-confidence, and reduced anxiety; some of the participants stated that the methods enhanced their feeling of success, provided multi-dimensional thinking, developed life skills, and increased students’ awareness. A few of them said that the assessment methods provided an opportunity to recognize students, showed creative skills, and saved independent learning skills.

Recommendations

The participants were asked their recommendations for implementing alternative assessment methods in math,
and responses were categorized as recommendations with specific subthemes, including environmental focus and education focus. For Turkish data, each subtheme was categorized into the following dimensions: the environmental focus was coded into reducing class size (n=2), providing equipment (n=1), arranging the methods according to class size (n=1) and positive attitudes towards teachers (n=1). The education focus was coded into an imperative for practical training for faculty (n=11); inspectors having sufficient knowledge (n=10), teachers attending seminars or courses (n=10), information and rubrics in the resources regarding the methods (n=7), paper instruction on using alternative assessment during teacher training at universities (n=1), and parents buy-in. In explaining the situation, one of the participants recommended:

"More information and forms should be provided in the resources regarding the methods. They [educators] should be given courses and seminars to fill the information gap. Both people who give the course or seminars and the inspector should have more information (T4)."

For the U.S. data, the recommendations for the environmental focus were that the district should adopt alternative assessment methods (n=1), and a certain portion of the budget should be allocated to alternative assessment methods (n=1). The education recommendations included providing information on using the methods (n=3), increasing teachers experience with the methods (n=2), demonstrating applications of the methods (n=2), giving more space to information and forms in the resources (n=1), including teachers in the development phase (n=1), and using the methods more (n=1). One of the participants who was adept at implementing the methods remarked:

"I think showing people how you use the methods, where they can reach information about the methods and how do you put them in action in the classroom, is probably the best way to have them used in their classroom purposely. Because I think some people use the methods for training, but they do not necessarily know how to use them or some people could benefit from using strategy. I think getting information out to people with concrete examples, teaching how do you use them. I can see people jumping on that (U1)."

**Frequency**

Participants were asked about the frequency with which alternative assessment methods were used. According to Turkish participants’ opinions, it was concluded that teachers generally used performance task, portfolio, observation, presentation, concept map, self assessment; sometimes they used peer assessment, rubrics, attitude scales, but they rarely or never used diagnostic tree, and structured grid. According to the U.S. participants, teachers often used performance task, rubrics, observations; teachers sometimes use portfolio, project, presentation, self and peer assessment. However, they rarely or never used attitude scale, concept map, diagnostic tree and structured grid.

**Familiarity**

The interviewees were asked ‘how familiar are you with these assessment practices?’ Turkish were familiar with observation, presentation, portfolio, rubric, peer assessment, project assignment, performance task, interview, self assessment, and concept map. The American participants were familiar with observation, presentation, portfolio, rubric, peer assessment, project assignment, performance task, interview and self assessment; However, one difference was that Turkish participants were somewhat familiar with attitude scale, while the Americans were unfamiliar with the attitude scale. In addition, both countries were unfamiliar with diagnostic tree and structured grid.

**Document examination data**

The second research question addressed in this study was ‘What are the alternative assessment practices suggested by curriculum materials used in 4th grade mathematics curriculum in Turkey and in the U.S.? ’ Two main themes emerged from the findings to this material resources and frequency of methods appearing in those materials.

**Material resources**

We found that the main material resources in the mathematics classes in the Turkish classrooms are the curriculum, teachers’ guidebooks, main mathematics textbooks, student workbooks, internet, colleagues’ opinions and private publications. As for the U.S., teachers used the Envision math curriculum, teachers’ guidebooks, everyday mathematics textbooks and student workbooks, including home connections, number corner, practice book, copied resources for common core standards, district lesson plans, and online materials.

**The frequency of methods appearing in the resources**

We found evidence of alternative assessment methods in only three of the materials we investigated: the curriculum, teachers’ guidebook and textbook in both countries. According to our investigation results in the
Turkish mathematics curriculum, instructions for all alternative assessment methods were found except the diagnostic tree and the structured grid. Instructions found in the curriculum, there were examples in the curriculum such as project, assignment, portfolio, observation, attitude scale, rubric, self and peer assessment. While in the U.S. curriculum, we found the instructions based on the following alternative assessment methods rubric, interview, observation and presentation. Teacher’s guidebook results showed that there were informative instructions concerning portfolio, project, observation and self assessment. Whereas both the Turkish and U.S. teacher’s guidebook forms includes project assignment, portfolio, performance task, self and peer assessment; the Turkish teacher’s guidebook includes attitude scale and interview missing in the U.S. guidebook, and the U.S. teacher guidebook includes rubric and presentation, which were missing in the Turkish teacher’s guidebook. The Turkish student textbooks had no information and forms on assessment methods. The U.S. student textbooks did include instructions and information regarding performance task, portfolio, presentation, project assignment, and self assessment.

**Semi-structured observations data**

The third research question addressed is ‘How frequently and what type of alternative assessment methods are used in the learning process in the classroom in 4th grade mathematics curriculum in Turkey and in the U.S?’ To study this, observations were performed in both Turkey and U.S’ classes to describe which and how frequently alternative assessment methods are used; what are the difficulties/problems experienced during the implementation of the methods used. The observation themes that emerged included classroom observation and difficulties encountered.

**Classroom observation**

During Turkish school observations, there was evidence of alternative assessment methods such as performance task, project assignment and other forms that teachers had posted on the walls and the activity corners. However, there were no direct observations of those assessment methods being implemented in the classrooms. One of the observation notes indicated:

“Two cupboards were available in the class. Additionally, classroom computers, printers, speakers, projection, banners with the seasons, pictures and other completed tasks such as performance tasks and project assignments were exhibited in the activity corner (T6).”

The observations conducted in the U.S. schools demonstrated that almost all the teachers used performance tasks, observations, portfolios, presentations, projects, rubrics, and peer and self assessments in the learning process, for example:

“Students brought their performance tasks, nature house made from bark and numbers and they exhibited them on the window sill. The students gave individual presentations of their tasks in turn, and their teacher examined the performance tasks individually. The teacher and the student peers asked questions. The teacher took brief notes both during and at the end of the presentation. After the presentation, the teacher and students commented on the performance task (U1).”

According to observation notes, the American teachers used most of the assessment methods mentioned earlier, but they did not apply a concept map, constructed grid, diagnostic tree or attitude scale due to lack of familiarity with these methods. Although the Turkish teachers cited their familiarity with the methods and that they found them worthwhile, but they did not apply them in their classroom during the observations.

**Difficulties encountered**

The teachers were observed with special attention paid both to the difficulties they encountered during the implementation phase of alternative assessment methods, as well as to the adjustment phase, in which their alterations to those methods were also reported. A close look at the gathered observation data from Turkish schools indicates that the difficulties encountered and the alterations made were not reported because the alternative assessment methods were not implemented. Turkish teachers were not observed using AA methods; however, they did provide evidence of the difficulties of implementation in their interviews. The collected observation data from the U.S. regarding difficulties the teachers experienced during the implementation of AA methods revealed that the majority of teachers reported time as the main factor; some of them occasionally experienced classroom management and the level difference among students as an issue, while two of them reported having difficulties organizing their students. A minority of teachers reported difficulties encountered in informing students about the alternative assessment methods, controlling the students under the new methods, developing new assessment forms aligned with the methods, and lacking experience using the methods. In the context of making their own measures for the new assessment methods, teachers benefited from other schema, collaboration with their colleagues, opportunities to give one-on-one attention to individual students, practices of supplying students with additional information on assessment procedures before applying those procedures, and prior preparation of forms for assessment before class.
DISCUSSION AND CONCLUSION

This study analyzed the applicability of alternative assessment methods (AA) used in 4th grade mathematics courses in Turkey and the U.S. in order to implement them more effectively. Document examinations, semi-structured observations and semi-structured interviews were conducted to determine and compare the level of applicability of alternative assessment methods in 4th grade mathematics courses. In this way, the similarities and differences were manifested.

Results showed that both countries used the curricula, teachers' guidebook, textbook, student workbook, online resources materials, private publications and colleagues' opinions as resources for implementing AA methods. In addition to these materials, the U.S. teachers also utilized home connections, number corner, practice book, copied resources for common core standards, and district lesson plans regarding mathematics instruction. Concerning the frequency of assessment methods in Turkish and U.S. math curricula, teachers' guidebook and textbook results indicated that the Turkish curriculum included explanatory and informative instructions and forms for all alternative assessment methods except for diagnostic tree and structured grid. In contrast, results showed that the U.S. curriculum had fewer AA methods only including concept map rubric, interview, observation and presentation.

In comparison, teacher's guidebooks in both countries included informative instructions on portfolios, projects, observations and self-assessments. However, differences emerged on some items. For example, Turkish teacher guidebooks also included forms on performance task, attitude scale, interview, and peer assessment. The U.S. teacher guidebooks included instructions and forms on performance task, presentation, rubric, and peer assessment in. Textbook investigation revealed that while there was not any information or forms regarding the assessment methods in the Turkish textbook, there was information and forms regarding the performance task, portfolio, presentation, project assignment, and self assessment in the US textbook.

A close look at the observational data from the U.S. schools showed that almost all teachers used performance task, observation, portfolio, presentation, project, rubric, and self and peer assessment. Similarly, Bol (2002) found that the observation method was widely used as an alternative assessment method in the U.S. classrooms. The majority of the U.S. teachers reported time as the main obstacle to using alternative assessment methods, and the rest reported that difficulty in teaching students about the methods was the main problem. This corroborated finding by Letina (2015) that found that time consuming is one of the main difficulties for alternative assessment efficient and effective implementation. However, the Turkish schools' observation data indicated that the assessment methods were not implemented directly in the classrooms, so the difficulties encountered were not observed. Köklükaya (2010) in her research, emphasized that teachers knew how to apply the alternative assessment; however, they did not implement the methods in their classrooms.

Based on the responses provided, most of the Turkish participants stated that they did not have enough information about the application of AA methods because of lack of education from the university, seminar or course, and inadequate expert support. This is consistent with findings of Buyuktokatli and Bayraktar (2014) and Anil and Acar (2008) that found that teachers did not have enough information due to the lack of education, and insufficient professional support. On the other hand, U.S. participants stated that they had enough information because they had sufficient resources, and were educated about the methods. Regarding applicability of AA methods, while many Turkish interviewees expressed that the methods were not applicable, all of the U.S interviewees expressed that they were.

Participants' opinion were collected regarding difficulties encountered in the implementation of the AA methods. It was notable that Turkish respondents asserted numerous difficulties, including environmental, difficulties regarding teachers, students, and parents, and the curriculum. The U.S. participants propounded a few difficulties including environmental and student difficulties. Both of these countries’ participants emphasized the difficulties of insufficient time, testing, lack of information and level differences among students. These findings are corroborated by various researchers (Karakus, 2010; Acat and Uzunkol, 2010; Birgin, 2010). Oliver (2015) also point out that implementing alternative assessment is labour intensive and time consuming. It requires a continuous training and development opportunities for educators, which could be costly.

The participants from two countries gave utterly distinct answers related to what kinds of modifications they would like to make. Most of the Turkish interviewees would like to modify or discard constructed grid, attitude scale, portfolio, rubric, concept map and diagnostic tree because they had no information about them. Consistent with this finding, Buyuktokatli and Bayraktar (2014), Duran et al. (2013), Kolomuc and Açılıs (2013) and Acat and Uzunkol (2010) pointed out that Turkish teachers had no information about the AA, so they used some of the methods, such as performance task and observation. Some of the Turkish teachers would not like to change anything because they found the methods were applicable and beneficial. A majority of U.S. interviewees requested changes in instructional methods, an increased focus on problem solving instruction, and growth assessment while a minority of interviewees replied that they were satisfied with the assessment methods, and gave “nothing”.

In terms of the barriers, the data indicated that almost all the Turkish interviewees identified an insufficient amount of time, overcrowded class size, testing pressure, too many methods, lack of expert support and knowledge, and difference in levels of students as barriers to
implementing the AA methods. Buyuktokatlı and Bayraktar (2014) and Yesilyurt (2012) confirmed that teachers had difficulty in practicing the alternative assessment techniques due to time constraints, crowded classrooms, negative effects of parents, and insufficient knowledge on these techniques. Similarly, almost all the U.S. interviewees reported barriers including inadequate time, the pressure to teach to the test, inadequate background knowledge for assessment, and the variety of student behaviors. In line with this finding, Letina (2015), Janisch et al. (2007) and Bol (2002) found that overcrowded classes, not having enough time, preoccupation with test scores, lack of support were barriers to conduct the assessment methods.

In analyzing the advantages of implementing alternative assessment methods for students, Turkish and U.S. participants commonly stated that the methods increased students interest and motivation towards the course, improved self-confidence, and enhanced the feeling of success. This is corroborated by other researchers who found that when students participated in alternative assessment activities, they appeared more eager to complete the activities, felt a greater sense of confident, and accomplishment as they completed the assessments (Brooks and Brooks, 2001; Marzano, 2003; Mintah, 2003; Zimbicki, 2007). The participants also stated that the methods enriched creativity, improved students research skills, reduced exam anxiety, developed higher-order thinking and life skills. These findings endorsed information that had been previously gathered by Bal and Doganay (2010), Aschbacher et al. (1995) and Century (2002).

According to participants who reviewed their recommendations for the implementing of methods, the Turkish participants generally recommended reducing class size, providing equipment, practical training, sophisticated inspectors, and informative seminars or courses. Marzano (2003), Roberts and Trainor (2004) and Zimbicki (2007) particularly emphasized that ‘research has proven teachers cannot effectively implement alternative assessment activities without professional development training’ (p. 232). Similarly, Letina (2015) confirmed that the application of alternative assessment would be certainly more effective if teachers were provided adequate support. The U.S. participants generally recommended a need for gaining more experience with AA method, adopting AA methods at a district level, supplying necessary financial support for resources and materials, and training in specific applications of AA methods.

In the interviews conducted both Turkey and US teachers reported familiarity and use of AA methods. In both countries, teachers generally used performance task, observation, project, portfolio, self and peer assessment; however, they rarely or never used attitude scale, diagnostic tree, and structured grid. In line with this finding, Daghan and Akkoyunlu (2014) and Buyuktokatlı and Bayraktar (2014) confirmed that the participants were familiar with observation, presentation, portfolio, rubric, project assignment, performance task, interview and self and peer assessment, however, they were unfamiliar with attitude scale, diagnostic tree, and structured grid. In addition, Sandford and Hsu (2013), particularly, emphasized in their study that teachers often used portfolio and its use creates a significant impact on student learning.

The results of this comparative study indicated that positive changes may not occur in Turkey and similar countries up until teachers are given manageable class size, sufficient time, enough training at the university or through inservice courses, adequate equipment, and proficient support to efficiently implement the alternative methods of assessment. The study therefore, recommend that educators and politician should make adjustment to apply the alternative assessment methods for differing classrooms or reduce the class size, teach the future teacher candidates how to use assessment in effective ways, provide enough materials for the teachers, and attend seminars or classes that directly address the assessment methods practices.

STUDY LIMITATIONS

This study has certain limitations. First, the study is a case study research, and the findings in this study should be considered with the limitations inherent in it. Although the generalization of the results may not be possible due to the nature of qualitative case study, the rich set of descriptive information regarding the context and students may enable readers to relate the findings of this research to their specific cases. Nevertheless, if similar studies were repeated at a later time and in different settings, it would be possible to obtain distinct and generalizable results because of changes in conditions and the participants’ experience and approaching. Last, the research has limited twenty-four 4th grade teacher participants that were included in the study samples based on a voluntary basis.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

ACKNOWLEDGEMENTS

The author sincere thanks go to Lynn Sunderman for her editing services at the University of Pittsburgh Writing Center.

REFERENCES

Acat MB, Uzunkol E (2010). Primary school teachers’ opinions about the problems that are encountered during the alternative assessment