

Design and Implementation of an automated Cooperative Society (Case study of Academic Staff Union of Polytechnics Nekede (ASUPNek) Multipurpose Cooperative Society, Federal Polytechnic Nekede, Owerri)

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Abstract

There are three (3) existing cooperative societies operating in Federal Polytechnic Nekede, Owerri. These societies all have one thing in common; they operate a manual administrative process. The motivation for this research work was due to the fact the manual administrative process of cooperative societies in the institution has led to members' dissatisfaction and complaints. The aim of this research work therefore is to design and implement an automated system that will solve the problems of the manual system of ASUPNek Multipurpose Cooperative Society. The methodology which will be employed to achieve this aim will be the waterfall model of software engineering methodology called structured system analysis and design methodology (SSADM) because of the sequential step by step approach involved in the development process. The result the production of an automated system to solve all the problems outlined in the problem statement.

Keywords: Cooperative society, automation, efficiency, communication, evaluation.

INTRODUCTION

The philosophy of cooperative society is to serve the common man and to liberate him from the oppression of the economically strong people and organizations. Mutual assistance and service are the objectives as distinguished from the aim of the other forms of organization, which is primarily making of profit.

It aims at encouraging self-help on the part of economically weaker sections of the society by looking after them. A truly cooperative society is the elimination of profit and provision of goods and services to members at a lower cost.

As a form of organization, it is an enterprise ordinarily set up by "economically weak" individuals to further their common economic and social interests to eradicate capitalist exploitation, to eliminate middlemen, and to bring the consumer and producer together.

The cooperative movement is commenced among the poor deprived labors and low-middle class people of the society in the post-industrial revolution.

It first begins in 1844 in Britain by 28 weavers. Later this organization revealed at different nations at different times.

What is a cooperative society?

A cooperative society is a voluntary association that started with the aim of the service of its members. It is a form of business where individuals belonging to the same class join their hands for the promotion of their common goals.

These are generally formed by poor people or weaker sections of people in society. It reflects the desire of the poor people to stand on their legs or own merit.

Cooperation works with the feeling of helping others. A cooperative society is a special type of society, which is established by an economically weak person for the betterment and upliftment of their economic condition through mutual help. Many business organizations have the main motive to earn profit and also exploit customers but this organization is based on rendering help to each other through available resources and also to provide goods to society members without profit or at a lower price.

So, this organization will function under the mutual cooperative of all the members. In this organization, all members will be equal and free for their rights. Therefore "one man one vote" system will prevail in this society.

Many business enterprises are established to earn a profit, but cooperative society has a motive of service to the members of the society for common welfare not to earn a profit.

The main objective of this society was to save poor people by providing goods at a lower price from the market price and eliminate the middle men and supply better services to its members.

Emmanuel (2017), Defined a Cooperative Society is a voluntary association of individuals, united by common bond, who have come together to pursue their economic goals for their own benefits. Cooperative Societies are governed by the Nigerian Cooperative Societies Act which provide for the registration of Cooperative Societies. The registration of Cooperative Societies is done at the Office of National Civil Registration.

Characteristics of a Cooperative Society

Based on the above definitions, we can derive the following characteristics of cooperative organizations.

Voluntary association

Everybody having a common interest is free to join a cooperative society. There is no restriction based on caste, creed, religion, color, etc. Anybody can also leave it at any time after giving due notice to the society.

That is the specialty of any cooperative society. There should be a minimum of 10 members for a cooperative society, but there is no maximum limit for the membership.

Separate legal entity

A cooperative society after registration is recognized as a separate legal entity by law. It acquires an identity quite distinct and independent of its members can purchase, dispose of its assets, can sue, and also can be sued.

Democratic management

Equalities are the essence of cooperative enterprises, governed by democratic principles. Every member has got equal rights over the function management of that society.

As such, each member has only single voting right irrespective of the number of shares held or capital contributed by them.

In the case of a cooperative society, no member detects the terms and conditions of the functioning because "one man one vote" is the thumb rule.

Service motive

The main objective being the formation of any cooperative society is for mutual benefit through self-help and collective effort. Profit is not at all on the agenda of the cooperative society.

But if members so like, they can take up any activities of their choice to generate a surplus to meet the day-to-day expenses.

Utilization of surplus

The surplus arising from the operation of a business is partly kept in a separate reserve and partly distributed as dividend among the members.

Cooperative is only one aspect of a vast movement that promotes the voluntary association of individuals having common needs who combine towards the achievement of common economic ends.

Cash trading

One exception in the cooperative society is that like other businesses; it never goes for credit sales. It sells goods based on cash only.

Hence, the cooperative society hardly comes across financial hardship because of the non-collection of sales dues. Members can only purchase based on credit, which is an exception to the present rule.

Fixed-rate of return

All members are supposed to contribute capital for the formation of a cooperative society or at the time of joining as a member of the cooperative society.

Government control

The government regulates all the cooperative societies of the country through its different rules and regulations framed from time to time.

Cooperative societies of the country are required to register, and sometimes different State Governments also frame laws regarding the registration and functioning of cooperative societies for their states.

Capital

The capital of the society is raised from its members by way of share capital.

However, the major part of finance is raised by the society by taking a loan from the government or by accepting grants and assistance from the Central or State Government or from the apex cooperative institutions like state and cooperative central banks operating in that state.

PROBLEM STATEMENT / JUSTIFICATION

The problems identified in this research work are outlined below:

1. Denial of loan facility to members to deserving members of the society
2. None declaration of dividends and distribution of accrued dividends to members
3. Failure to proper account for the accounts and finances of the union
4. Administration of the society based on favoritism and cliques
5. The manual system of administration results in loss of member's file and information as well as clumsiness in accessing members' information.

The aim of this research work is to design and implement an automated cooperative system for ASUPNek Multipurpose Cooperative Society.

The justification of this research work therefore is that this proffered solution will solve the problems outlined above and form a blueprint for other cooperative societies existing within the polytechnic environment.

OBJECTIVE(S) OF THE STUDY

The aim of this project research is to develop an automated cooperative society system for ASUPNek Multipurpose Cooperative Society, to solve the problems associated with the manual ways of running the cooperative society.

The objectives of this project research therefore are:

1. To design a system that will make loan acquisition easier for members of the society.
2. To design and implement a database system that will maintain the records of members of the cooperative society.

3. To secure the financial records of members of the society through the automation of the system.
4. To validate authentic members of the cooperative society.
5. To design develop a software that will ensure prompt and accurate withdrawal of contributions by members of the cooperative society.
6. To develop an efficient platform for calculating and distributing dividends to members of the cooperative society.

Theoretical framework

According to (un.org, 2013), a cooperative is defined as an association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and concern for others.

The international cooperative alliance (ICA) identified that Cooperatives are built on seven principles which are:

1. Voluntary and open membership
2. Democratic member control
3. Member economic participation
4. Autonomy and independence
5. Education, training and information
6. Cooperation among cooperatives
7. Concern for the community ("*co-operative-identity-values-principles*", *n.d*)

Cooperative Thrifts and loans were created as non-profit cooperative organizations. They were typically managed by the membership and local institutions that served well-defined groups of aspiring homeowners. Cooperative societies like thrift and loans act as breakaways for their members from banks and other financial institutions, especially on the issues of loans and interests. This is because they offer the soft loans and low interest rates (EH.net, 2013).

Although, there is no consistency to the exact origin of the co-operative movement, many academics argue that the origins lie within Europe (Shaffer, 1999; Holyoake, 1908). The first recorded co-operatives date back to 1750 in France, where local cheese makers in the community of Franche-Comté established a producer cheese co-operative. Within the decade, co-operatives had developed in France, United Kingdom, United States and Greece.

Cooperatives the world over are in a state of flux. In almost all parts of the world, cooperatives face one or more of the following crises: crisis of ideology, crisis of capital, crisis of credibility and crisis of management (Taimni, 1997).

Cheney (1995), identified five challenges facing cooperatives to be centered on cultural transformation, competition and expansion, wage solidarity, centralization and reorganization, and programmes to increase productivity and participation.

Laidlaw (1974), contributed that cooperatives while striving for efficiency, often tend to imitate other businesses, but in pursuing a social purpose they bring out the features, which make them different. Educating, training and Introduction

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Laidlaw (1974), contributed that cooperatives while striving for efficiency, often tend to imitate other businesses, but in pursuing a social purpose they bring out the features, which make them different. Educating, training and retraining of members in general and officers in particular are always a challenge to cooperatives especially in developing countries. A cooperative without a strong component of education is in danger of losing its essential character, that is, the human and personal characteristics which distinguish it as a cooperative.

Education is of paramount importance to the cooperative sector. Unless all those responsible for cooperatives (directors, officers, members, staff) are well informed and knowledgeable, cooperatives are likely, in some countries, to become much like capitalist, profit-seeking business, or in other countries to become handmaids of the State. Education makes people easy to lead, but difficult to drive; easy to govern but impossible to enslave (Ahmad, 2005).

Taimni (1997) suggested, that cooperatives should make optimum use of all resources and strive continuously to enhance productivity of resources; ensure highest efficiency while providing services to members; improve management capabilities and competencies through effective organizational designs and structures; mobilize capital and lay greater stress on internal capital formation and accumulation; develop and retain human resources - members, leaders, staff and managers; forge strategic alliance with key institutional actors in the new environments; evolve and sustain integrated, vertical structures; increasingly focus on directly enhancing socio-economic conditions of their members by undertaking value-added operations; encourage members' participation through improved, diversified services; and strictly adhere to the values of honesty, openness, caring and concern for community and environments.

METHODOLOGY

Study area

The ASUPNek Multipurpose Cooperative Society, Federal Polytechnic, Nekede is the cooperative arm of Academic Staff Union of Polytechnics (ASUP), Nekede chapter. It is located in Nekede, Owerri West local government area in Imo State, South-Eastern Nigeria. It was established in the year 2015 and has been in existence for 6 years till date.

Data collection

This research is quantitative in nature, in that there would be generalize results from our analysis of data using statistical tools. Data for analysis will be collected from two main sources namely:

1. Primary Source
2. Secondary Source

Primary Source

The primary source of data collection refers to all the materials of statistical investigation which were collected by the researcher for a particular purpose. They can be obtained through a survey, observation questionnaire or as experiment. For the purpose of this research work; the researcher has adopted the questionnaire method for this research work.

Secondary source

These are data from textbook Journal handset etc. they arise as byproducts of the same other purposes. Example administration, various other unpublished works and write ups were also used. The researcher will also be inclined to collect data from these sources.

DATA ANALYSIS AND INTERPRETATION

Efforts will be made at this stage to present, analyze and interpret the data collected during the field survey. This presentation will be based on the responses from the completed questionnaires. The result of this exercise will be summarized in tabular forms for easy references and analysis. It will also show answers to questions relating to the research questions for this research study. The researcher employed simple percentage in the analysis.

Data Analysis

The data collected from the respondents were analyzed in tabular form with simple percentage for easy understanding. A total of 100 (one hundred) questionnaires were distributed and 100 questionnaires were returned.

Question 1

Gender distribution of the respondents

Table 1. Gender distribution of the respondents

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	50	50	50	50
Valid Female	50	50	50	100.0
Total	100	100.0	100.0	

From the above table it shows that 50% of the respondents were male while 50% of the respondents were female.

Question 2

The positions held by respondents

Table 2. The positions held by respondents

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Heads of department	30	30.0	30.0	30.0
Valid Chief lecturers	25	25	25.0	55.0
Valid Principal lecturers	20	20	20.0	75.0
Valid Senior lecturers	25	25	25.0	100.0
Total	100	100.0	100.0	

The above tables shown that 30 respondents which represent 30% of the respondents are heads of department, 25 respondents which represents 25 % are Chief lecturers 20 respondents which represents 20% of the respondents are Principal lecturers, while 25 respondents which represents 25% of the respondents are Senior lecturers.

Test of hypothesis

Computerized system does not aid in the automation of cooperative tasks.

Table 3. Computerized system does not aid in the automation of cooperative tasks

Response	Observed N	Expected N	Residual
Agreed	38	25	13
strongly agreed	33	25	8
Disagreed	18	25	-7
strongly disagreed	11	25	-14
Total	100		

Test Statistics

Table 4. Computerized system do not aid in the automation of cooperative tasks

Chi-Square	14.376 ^a
Deg. Of freedom	3
Asymp. Sig.	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3

Table 5. Database system does not maintain records of cooperative members' contribution

Response	Observed N	Expected N	Residual
Yes	55	33.3	21.7
No	28	33.3	-5.3
Undecided	17	33.3	-16.3
Total	100		

Decision rule:

The researcher therefore rejects the null hypothesis that computerized system do not aid in the automation of cooperative tasks as the calculated value of 14.376 is greater than the critical value of 7.82

Therefore, the alternate hypothesis is accepted that computerized system do aid in the automation of cooperative tasks.

Test of hypothesis two

Test Statistics

Table 6. Database system do not maintain records of cooperative members' contribution

Chi-Square	22.940 ^a
Df	2
Asymp. Sig.	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 44.3.

Decision rule:

The researcher therefore rejects the null hypothesis that database system does not maintain records of cooperative members' contribution as the calculated value of 28.211 is greater than the critical value of 5.99.

Therefore, the alternate hypothesis is accepted that state that database system does maintain records of cooperative members' contribution.

CONCLUSION

The outcome of this research work is to ascertain if the overall objectives of this research were achieved. The stated objectives were:

To design a system that will make loan acquisition easier for members of the society.

To design and implement a database system that will maintain the records of members of the cooperative society.

To secure the financial records of members of the society through the automation of the system.

To validate authentic members of the cooperative society.

To design develop a software that will ensure prompt and accurate withdrawal of contributions by members of the cooperative society.

To develop an efficient platform for calculating and distributing dividends to members of the cooperative society.

It is therefore noteworthy that all these objectives were achieved which further justifies the relevance of this research work to the study area.

Advantages of the research work

A software solution for accessing staff information was created for efficient searching and retrieval of cooperative members' information.

The software solution provided an easy process for evaluating staff performance.

The software solution also created an electronic database for storage of all staff details including staff qualifications and appraisal records.

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