



## USER PARTICIPATION IN THE MODIFICATION PROCESSES OF PUBLIC HOUSING ESTATES IN YOLA.



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### Abstract:

This study examined the modes of user participation in the modification of public housing Estates in Yola. Data was elicited from modified owner occupier houses in eleven housing estates and the pattern of user participation was measured using Wulz seven approaches to user participation – Representation, Questionary, Regionalism, Dialogue, Alternative, Co-decision and Self-decision. Components of entrance to the buildings, access to goods and services and usability of rest rooms, was used to measure user satisfaction at planning, design and construction stages of the modification. Findings from the study indicates that Overall Satisfaction with modification outcomes has a significant positive correlations at  $p < 0.01$  level with the variables of the components. A comparison of level of satisfaction among the different modes of users participation in the buildings modification revealed highly statistically significant mean differences ( $p < 0.05$ ) between the groups at all stages (Planning, Design, Construction). “Self-decision” had significant higher mean level of satisfaction ( $p < 0.05$ ) compared with the other modes of participation at all stages. The study recommends user controlled housing planning, design and construction, to achieve high level of satisfaction and reduce modification in urban mass housing.

### Keywords:

User participation, Housing modification, User satisfaction,

### Introduction

Housing is one of the three basic needs of man and the most important for his physical survival after food. In spite of this, inadequate housing still remains a challenge to the global society especially in developing countries. Challenges with existing stock include inaccessible entrances, poor access to goods and services and inadequately designed internal layouts (Gusheh *et al* 2021). The inappropriateness of house arises from the method of housing provision employed in Nigeria. Conventional housing provisions does not recognize user participation in the planning, design and construction process of the houses and this is regarded as the major cause of user dissatisfaction (Noraini, 1993). Modification is consequently a user participated home making (Jusan, 2007b), a protest when people are forced to live in an inappropriate environment (Priemus 1986). The provision of appropriate housing can be enhanced in two ways: by making sure that subsequent housing construction meets minimum accessibility requirements from the beginning, or through modification of existing stock. (Gusheh *et al* 2021). While mainstreaming new accessible housing design and housing modification programmes are the most common way in which countries seek to meet the housing needs of the people, (Okoye, 2014). Mainstreaming will have a limited effect in the short to medium term, most people will live in existing stock (Okoye, 2017).

#### User participation

User participation is the active involvement of the people who will live with the consequences of a service or action on how it is delivered. A process of involving community members, in substantially in decisions about the form and management of their environment Comerio (1987). This concept has been studied by other researchers as: “user participation” (Onder and Der, 2007; Khalaed, 2004);

“community participation” (Choguill, 1996; Gonzalo and Massyn, 2008); “user involvement” (Latto and King, 2004); “community involvement” (Jenkins, 1999); “citizen participation” (Arnstein, 1969; J. F Tunner, 1977); and “resident participation” (Leung, 2005). The basic concept is that of self-determination, control and option in proposed actions of people’s interest (Latto and King, 2004). The importance of user participation in housing processes cannot be over emphasised. According to Turner, (1987) “When people have no control over or nor responsibility for key decisions in the housing process...dwelling environments may (or will) instead become a barrier to personal fulfilment and a burden on the economy.” (Turner, 1987 p. 274)

For housing to be appropriate it should have, as a basic constituent, the participation of its future users (Bhatt and Navarret 1991). User participation is a method of providing user preferred living environment. Noraini (1993) emphasizes the importance of user participation to achieve satisfaction:- “Households who had built their own homes were generally more satisfied with their housing conditions because they had greater user control over decisions which would influence what, how, and when their housing would be built. The increase user control over important decisions about their housing had increased their user satisfaction”(Noraini 1993 p.149). Turner (1976, 1987) suggests that user participation is the only way to ensure user satisfaction, irrespective of other factors. User participation ensures sustainable housing, sustainable project, adequate design, needed housing environment and user values (Vahid, *et al* 2017).

The modes of user participation determines the level of participation. Khalaed (2004) states that, participation begins where users take minimal part in the decision-making process, and ends where the user is in total control and makes

all decisions while the professional provide technical support. Several research have examined how users can participate in housing delivery process. The following are highlighted. Arnstein's Ladder of Participation (Arnstein, 1969), shows six modes of user participation: user makes all decisions, user makes some decisions, User influences decisions, Housing developer seeks users opinion before making decision, Developer explains decisions to users beforehand and developer tells users what decisions have to be made. John F. C. Turner divides the process of participation in three basic components: planning, construction and management (Turner, 1977). Hamdi (1995) categorized the stages into five process- initiation, planning, design, implementation and maintenance. Choguill, (1996) proposed eight levels of user participation as: empowerment, partnership, conciliation, dissimulation, diplomacy, informing, conspiracy, and self-management. Onder and Der, (2007) proposed three stages; establish user needs, involve user in providing necessary information, involved user in design process. Wulz (1986) breaks the concept of participation into seven different forms, ranging from the list amount of user involvement to the most. 1) Representation: the most passive form of participation where the client's needs are represented by the knowledge of the architect, not by the input of the client. 2) Questionary: a rational method based on scientific inquiry into finding objective knowledge, using surveys, questionnaires and the like, and subjecting these to rigid statistical analysis. 3) Regionalism: while including some elements of the previous two categories, regionalism adds to the fabric a focus on the culture within a geographical area. 4) Dialogue: this occurs when there is unstructured conversation between user and designer that may or may not influence the final outcome. 5) Alternative: when users are given a range alternatives to select from. This can be considered a form of participation, especially when the choices emerge from the previous four categories. 6) Co-decision: this happens when decision making is balanced between designer and users and requires the latter be involved in decision-making from the outset. 7) Self-decision: in this mode user is in control and may be limited to simply providing technical support self-help or self-build operations. The pattern of user participation in this study was examined using Wulz (1986) approaches to user participation.

### Methodology

Survey research method was used to study 251 numbers of modified owner occupied housing population in 11 mass housing Estates in Yola, Adamawa State Nigeria, as a case location within the context of formal housing, provided by Government. A pre-survey visit to the housing schemes was carried out, prior to the actual survey. Each house was visited to elicit information on Tenancy (Owner or renter) and modification status. Any modification made on any part of the houses was accepted and included in the population. Actual survey was performed using self-administered questionnaire for data collection. A total of number of 251 questionnaires was administered, but 246 questionnaires were collated from those that have responded, representing 98% of respondents.

The questionnaire comprises of questions on all the required aspect of modification. It consists of five sections: user and

house characteristics, house alteration background, user participation, alteration outcomes, general perception of the alteration outcomes and satisfaction levels. The pattern of user participation in this study was examined using Wulz (1986) approaches to user participation as follows: Representation, Questionary, Regionalism, Dialogue, Alternative, Co-decision and Self-decision.

Satisfaction level was used to indicate the meeting of user need in the modified houses. The study analyses meeting user need in the studied houses based on user satisfaction levels with the modification outcomes. User satisfaction with modification outcomes in the public housing estates, was measured using components of accessible entrances/approach to the buildings, access to goods and services and usability of rest rooms. A Likert scale ranged from "1" = very dissatisfied, "2"=dissatisfied, "3"=slightly satisfied, "4"=satisfied and "5"=very satisfied, was used to measure respondents' level of satisfaction on various housing components. The overall satisfaction for each modified feature was analyzed based on a mean score of 3.00 on a five point scale as positive indication of satisfaction, and values below 3.00 indicating dissatisfaction. If the mean response is below 1.50, this indicates that the respondents are "Very Dissatisfied"; between 1.50 and 2.49, this indicates that the respondents are "Dissatisfied"; Between 2.50 and 3.49, this indicates that the respondents are "Slightly Satisfied"; Between 3.50 and 4.49, this indicates that the respondents are "Satisfied"; above or equal to 4.50, this indicates that the respondents are "Very Satisfied". Analysis of the data was done using descriptive statistics, correlation (Spearman's rho) and Analysis of Variance (ANOVA) in SPSS version 21.

### Results and Discussion

#### *Mode of Participation in Housing Modification*

It is important to understand the modes of user participation at different phases of the housing modification in the study area. Table 1 shows that at the planning phase, 2.0% of the modifications were outcomes of the knowledge of the architect, not by the input of the user (Representation). 8.5% of the users' modification processes were based on scientific inquiry into finding objective answers (Questionary). 2.8% of the modifications were based culturally accepted modes within the geographical area (Regionalism). 2.4% had unstructured conversation with the Architect that may or may not have influence the final outcome (Dialogue). 2.0% were given a range alternatives developed by the Architect to select from (Alternatives). 20.3% of users shared the decision making in the modification processes between the Architect and themselves and were involved in decision-making from the outset (Co-decision). 61.8% of users were in total control of the design and modification process (self-decision). Users' mode of participation at the design phase shows percentage values of 2.8, 7.3, 3.7, 2.8, 3.7, 16.3, 63.4, for Representation, Questionary, Regionalism, Dialogue, Alternative, Co-decision, Self-decision respectively; and percentage values of 2.8, 8.5, 5.7, 4.1, 2.0, 9.3, 67.5, for Representation, Questionary, Regionalism, Dialogue, Alternative, Co-decision and Self-decision respectively at construction phase

**Table 1: Distribution of Modes of user Participation at the Planning, Design and Construction Phases of the Alteration in the Eleven Housing Estates**

S/N	Mode of User Participation	Planning Phase		Design Phase		Construction Phase	
		Frequency	%	Frequency	%	Frequency	%
1	Representation	5	2.0	7	2.8	7	2.8
2	Questionary	21	8.5	18	7.3	21	8.5
3	Regionalism	7	2.8	9	3.7	14	5.7
4	Dialogue	6	2.4	7	2.8	10	4.1
5	Alternative	5	2.0	9	3.7	5	2.0
6	Co-decision	50	20.3	40	16.3	23	9.3
7	Self-decision	152	61.8	156	63.4	166	67.5
	Total	246	100	246	100	246	100

This study found that "self-decision" was the common approach employed by the users in their modification works (Tables 1). This is parallel to the previous authors such as Salama (1996); Sheferaw (1998), Jusan (2007b). "Self-decision" according to Wulz (1986) is an approach where the users are in total control of the home-making. This method of user participation is considered as the ultimate form of user involvement that optimises user freedom in the making of their house.

**Overall Satisfaction with Modification Outcomes**

Analysis of overall satisfaction with the modification outcomes shows that the residents are in general, satisfied with the modification outcomes in the eleven housing estates in Yola, with 5.3% reporting as dissatisfied, 14.2% reporting as slightly satisfied, 60.2% reporting as satisfied and 20.3% reporting very satisfied. The mean score for the overall satisfaction with modification outcomes stands at 3.96, (assuming 3 represents moderate satisfaction) the level of overall satisfaction is high and indicates that the residents are satisfied with public housing unit. Although only 5.3% of the residents reported actual dissatisfaction with the modification outcomes, given that the overall satisfaction, there is still need to develop a strategy that will improve the residential satisfaction of residents.

**Relationship between Mode of Participation and Extent of Satisfaction with Modification Outcomes**

Analysis of Variance (ANOVA) was used to compare the Mean satisfaction level with modification outcomes at the

three phases of the modification. The result shows that the residents are most satisfied with modification outcomes at construction phase (4.21), followed by planning phase (3.54), and design phase (3.53) ( table 2). Residents' satisfaction with modification outcomes at different mode of participation show means values of 1.80, 1.19, 1.43, 2.00, 1.20, 2.46, 4.52, for Representation, Questionary, Regionalism, Dialogue, Alternative, Co-decision, Self-decision respectively at planning phase; 1.71, 1.28, 2.00, 2.29, 1.44, 2.75, 4.34, for Representation, Questionary, Regionalism, Dialogue, Alternative, Co-decision and Self-decision respectively at design phase and 3.14, 2.92, 3.00, 3.60, 3.00, 3.78, 4.64, for Representation, Questionary, Regionalism, Dialogue, Alternative, Co-decision and Self-decision respectively, at construction phase.

This shows that respondents' participation through self-decision indicates the highest level of satisfaction with modification outcomes and that satisfaction rate with all modes of participation is highest at construction phase.

**Table 2: Comparison (Mean & SD) of Level of Satisfaction for the Different Phases of the Building modification Using Analysis of Variance (ANOVA)**

Mode of User Participation	Planning Phase			Design Phase			Construction Phase		
	Mean	SD	Remark	Mean	SD	Remark	Mean	SD	Remark
Representation	1.80	1.095	DS	1.71	1.254	DS	3.14	0.690	SS
Questionary	1.19	0.680	VD	1.28	0.669	VD	2.95	1.359	SS
Regionalism	1.43	0.787	VD	2.00	1.732	DS	3.00	1.177	SS
Dialogue	2.00	1.549	DS	2.29	1.890	DS	3.60	1.075	S
Alternative	1.20	0.447	VD	1.44	1.014	VD	3.00	1.581	SS
Co-decision	2.46	1.681	DS	2.75	1.581	SS	3.78	0.600	S
Self-decision	4.52	0.876	VS	4.34	1.150	S	4.64	0.623	VS
Total	3.54	1.682	S	3.53	1.672	S	4.21	1.027	S
F Value	57.055			33.309			28.724		
P Value	<0.001*			<0.001*			<0.001*		

\*Mean difference significant at  $P \leq 0.05$ , SD – Standard Deviation

VD – Very Dissatisfied, DS – Dissatisfied, SS – Slightly Satisfied, S – Satisfied, VS – Very Satisfied

The comparison of level of satisfaction among the different modes of users participation in the buildings alteration as shown in table 2 revealed that there are highly statistically significant mean differences ( $p < 0.001$ ) between the groups in all the phases (Planning, Design & Construction) as determined by one-way ANOVA ( $F = 57.055, 33.309, 28.724$ ). The analysis also showed that the Self-decision users had significant higher mean level of satisfaction

( $p < 0.05$ ) compared with the other modes user in all the phases (Planning – 4.52, Design – 4.34, Construction – 4.64). This implies that self-decision was a satisfactory mode of participation in the buildings alteration in all the different phases (very satisfied, satisfied and very satisfied respectively), with that of construction phase having highest mean satisfaction level.

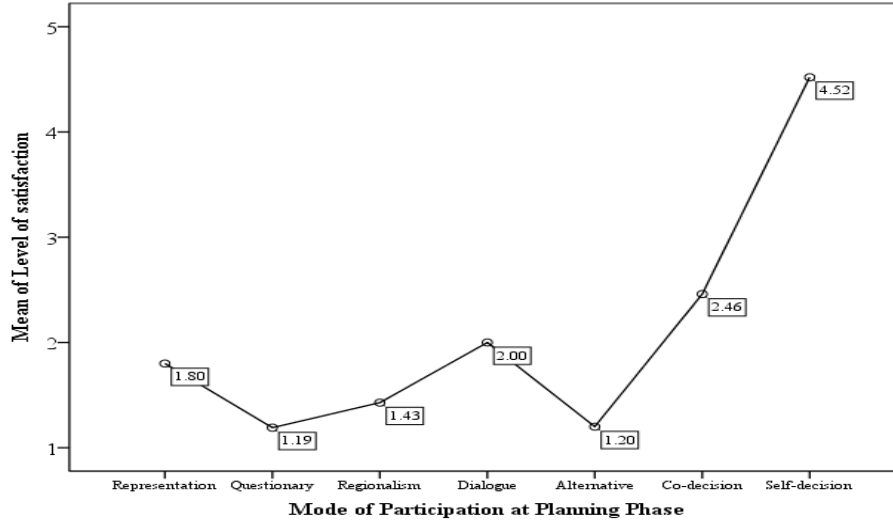


Figure 1: Mean Plots (Planning Phase)

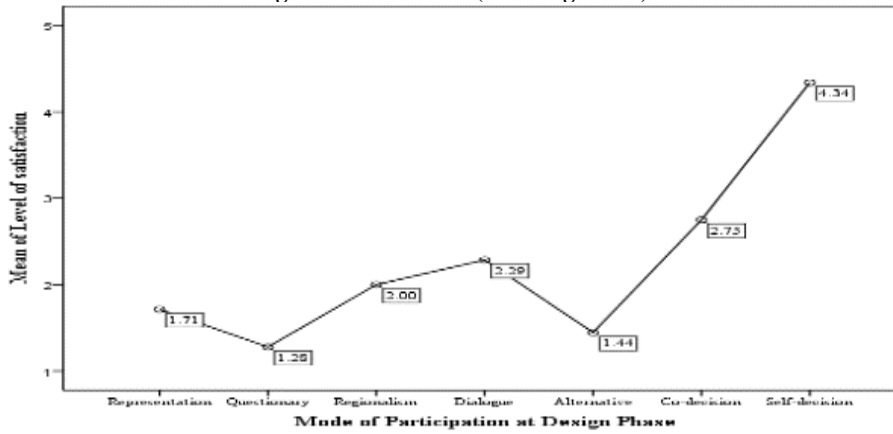


Figure 2: Mean Plots (Design Phase)

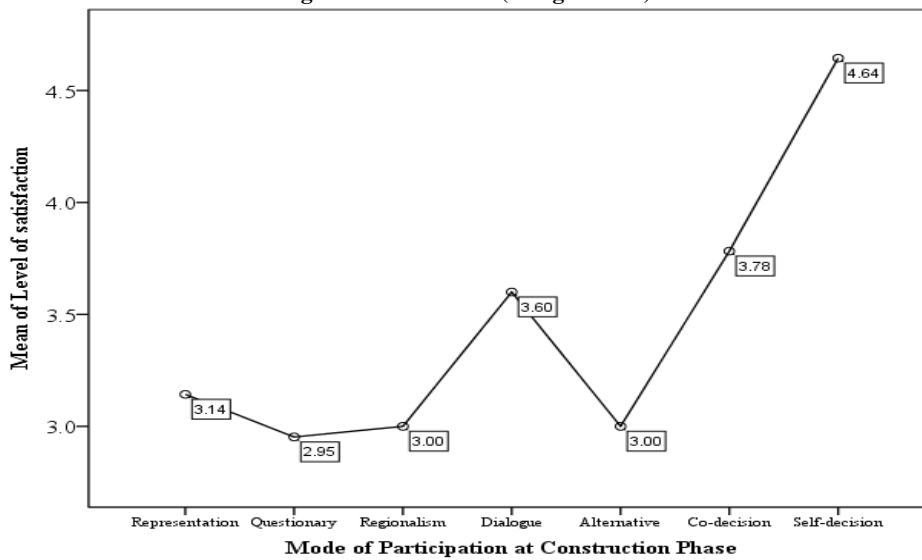


Figure 3: Mean Plots (Construction Phase)

### Conclusion

The study examined user participation in the modification processes in public housing modification. The objectives were: to determine the mode of participation and extent of satisfaction in the housing modification; to make recommendations that can improve the changing housing needs of the people based on the modification outcomes. The study suggests that modification practices due to unsuitability of the original house to users' expectation resulted in high level of satisfaction. Users are satisfied with the modification outcomes thus suggesting that modification works in the case study area met user need. This is the key determinant that motivated the users to modify their houses. This study recommends user controlled planning, design and construction of their buildings, this will improve the housing satisfaction and reduce modification in the study area.

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