Survey data on users perception of flexibility of spaces in selected cultural center in southwest Nigeria

Adedapo Oluwatayo a, Adedotun O. Akinola a,*, Tosin Babalola a, Hilary I. Okagbue b, Samuel Olademehin a, Segun Eyiaro a, Samuel Oludara a, Ometaghogho Johnson a, Oluwasina Famurewa a, Obiora Obi a, Adebambo Adewakun a, Ekara N. Ekara a

a Department of Architecture, Covenant University, Ota, Nigeria
b Department of Mathematics, Covenant University, Ota, Nigeria

ABSTRACT

Architects that specialize in designing cultural centers have often been accused of providing spaces that become obsolete in the coming years. This is because as technology and time changes, requirements also change, necessitating new arrangement of spaces. Very few of the spaces provided in cultural centers can however be adapted to other uses. This has affected the sustainability of those spaces. These data present the perceptions of users on the need for, and the features that enhance flexibility in cultural centers. The data were obtained from a questionnaire survey of users of the three (3) cultural centers in Nigeria. The survey was conducted between October and November 2017. The data may facilitate the evidence-based approaches to facilitate improved built environment and will be useful to built environment professionals, policy makers and design researchers.

© 2018 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).
### Specifications Table

| Subject area   | Architecture                      |
|----------------|-----------------------------------|
| More specific subject area | Flexible and adaptable spaces in architectural designs |
| Type of data   | Tables and Figures                |
| How data was acquired | Field Survey through questionnaire |
| Data format    | Raw and analyzed                  |
| Experimental factors | Both purposive and random sampling techniques were used in the selection of respondents in the survey |
| Experimental features | The data were obtained from the users of the three (3) cultural Centers: June 12 Cultural Centre, Ogun State, National Theatre, Lagos State and Oyo Cultural Centre, Oyo State. Data were analyzed using descriptive statistics. |
| Data source location | Ogun, Oyo and Lagos States, Nigeria |
| Data accessibility | All collected data are in this data article |

### Value of the data

- Descriptive statistics were used in the presentation of the dataset which if analyzed will help reveal the factors that affects the use of cultural centers and features that can enhance flexibility in the use of cultural center spaces.
- The data could be used in development of design standards in the design of cultural buildings.
- The data could be used as bases for comparison of flexibility of spaces in cultural center in different countries.
- The data can directly help building design professionals take appropriate decisions in the design of cultural center in Nigeria.
- The dataset can be useful to the government and private developers as a guide in addressing the issue of flexibility in design of other cultural center and similar buildings taking into consideration the users’ perception.
- The work is a major improvement over [1–9].

### 1. Data

The data were drawn out of survey of three (3) cultural centers in South West, Nigeria. The data instrument for the study is the questionnaire containing both open and close-ended questions with each variable measured on the Likert-like five-point scale. Forty-six out of fifty questionnaires administered for the users of the selected cultural center were returned. The data were collected between October and November 2017. The data collected were analyzed using Statistical Package for Social Science (SPSS). Frequencies and mean score rankings were carried out. Table 1 shows users purpose of visit, Fig. 1 reveals number of times users visited the Center, Fig. 2 describes the

### Table 1
Respondents purposes of visit in percentage.

| S/n | Purpose of visit     | Percentage |
|-----|----------------------|------------|
| 1.  | Cultural events      | 25         |
| 2.  | Work and business    | 25         |
| 3.  | Leisure              | 13.7       |
| 4.  | Excursion            | 9.1        |
| 5.  | Religious            | 4.5        |
| 6.  | No response          | 22.7       |
respondents’ perception of space allocation in cultural center, while Fig. 3 shows users satisfaction of spaces. Also, Table 2 shows details of the reasons why flexibility is important in the design of cultural center and Table 3 shows respondents’ perception of features that enhances flexibility in the design of cultural center.

2. Experimental design, materials and methods

A survey of users of three (3) cultural centers was carried out in South West, Nigeria. The cultural centers investigated are June 12 cultural center, Ogun State, National Theatre, Lagos State and Oyo Cultural center, Oyo state. Studies [10–20] have adopted a similar approach in obtaining empirical data. The sources of data used in this research were primary. Fifty (50) questionnaires containing close and open-ended questions were administered to random sampled users of the three (3) cultural centers in southwest Nigeria. A response rate of 92% was recorded. Data obtained were collected between October and November, 2017. Data collected were analyzed using Statistical Package for
Fig. 3. Users satisfaction of spaces.

Table 2
Reasons why flexibility is important in the design of cultural center.

| For which reason is flexibility important? | Percent of cases |
|------------------------------------------|------------------|
| Change in function                        | 89.1             |
| To achieve more space                     | 60.9             |
| Change in technology                      | 58.7             |
| Change in pattern of use                  | 47.8             |
| Promoting user comfort                    | 37.0             |
| Locating activities with close relationships together | 19.6             |

Table 3
Respondents’ perception of features that enhances flexibility in the design of cultural center.

| Feature                                      | Mean   | Std. deviation |
|----------------------------------------------|--------|----------------|
| Use of sliding panels and doors              | 4.1957 | 0.45312        |
| Use of demountable partitions                | 4.1304 | 0.40048        |
| Use of compatible furniture                  | 4.1304 | 0.49927        |
| Appropriate technology                       | 4.1087 | 0.52613        |
| Lightweight internal construction            | 4.0870 | 0.58977        |
| Use of movable furniture                     | 4.0870 | 0.55080        |
| Use of movable partitions                    | 4.0652 | 0.32675        |
| Open floor plans                             | 4.0435 | 0.55604        |
| Use of stackable furniture                   | 4.0222 | 0.49949        |
| Appropriate Lighting                         | 4.0217 | 0.74503        |
| Use of space-saving furniture                | 4.0217 | 0.44667        |
| Proper acoustic treatment                    | 4.0000 | 0.66667        |
| Use of multi-functional furniture            | 3.9783 | 0.57693        |
| Use of reconfigurable furniture              | 3.9783 | 0.44667        |
| Proper electrical planning e.g. Raised floors| 3.9783 | 0.61424        |
| Frame construction                           | 3.9565 | 0.55604        |
| Use of soft space dividers and curtain walls | 3.9348 | 0.53342        |
| Use of operable walls                        | 3.8913 | 0.60473        |
| Minimal use of load-bearing supports         | 3.8478 | 0.59507        |
| Providing spaces for future expansion        | 3.8043 | 0.65386        |
| Locating activities with close relationships together | 3.5652 | 0.77895        |
| Open-ended corridors                         | 3.5435 | 0.72131        |
| Façade openings and screens                  | 3.5000 | 1.00554        |
| Multi-functional floor design                | 3.4783 | 0.75245        |
| Multifunctional ceiling design               | 3.4565 | 0.88711        |
| Grid design/concept                          | 3.3333 | 0.85280        |
| Use of retractable panels, roofs, floors, etc.| 3.2826 | 0.88602        |
| Use of responsive building elements          | 3.0000 | 0.81650        |
Social Science (SPSS). The data on respondents' profiles were analyzed using multiple responses (frequencies).

A sample of the questionnaire used is presented as Supplementary data A. A careful examination of the questionnaire reveals that it has three main sections. Section A was used to extract data on the socio-economic characteristics of the respondents, and their levels of satisfaction with the facilities provided in the cultural center. The data were extracted using 5-Likert type scale, where 1 represents “Very Dissatisfied”; 2 represents “Dissatisfied”; 3 represents “Undecided”; 4 is for “Satisfied”; and 5 represents “Very Satisfied”. Section B had questions on the extent of importance of spaces provided in cultural center in a scale of 1 to 5, where 1 represented “Totally Not Important”; and 5 “Very Important”. The last part of the questionnaire -Section C-, was used to gather data on the extent to which some features can enhance flexibility in the use of cultural center on a scale where 1 = "Totally Not"; and 5 = “Large Extent”. Further analysis using different statistical tools can be done using the raw data presented as Supplementary data B.

Acknowledgements

The researchers acknowledge the effort given by Covenant University through the Covenant University Centre for Research, Innovation and Development (CUCRID) to furthering of this research work.

Transparency document. Supporting information

Transparency data associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2018.06.099.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2018.06.099.

References

[1] S.R. De Paris, C.N.L. Lopes, Housing flexibility problem: review of recent limitations and solutions, Front. Arch. Res. 7 (1) (2018) 80–91.
[2] C. Cappai, M.A. Segantini, Seeds of legacy: hybrid and flexible spaces, Arch. Des. 88 (3) (2018) 92–101.
[3] J.Y. Kim, N.S. Cho, S. Cho, K. Kim, S. Cheon, K. Kim, Y.H. Kim, Graphene electrode enabling electrochromic approaches for daylight-dimming applications, Sci. Rep. 8 (1) (2018) (Article number 3944).
[4] R. Newell, R. Canessa, Picturing a place by the sea: geovisualizations as place-based tools for collaborative coastal management, Ocean Coast. Manag. 141 (2017) 29–42.
[5] W. Nadim, Live-work and adaptable housing in Egypt: a zero commuting concept, lessons learnt from informal developments, Smart Sustain. Built Environ. 5 (3) (2016) 289–302.
[6] O.Q. Abdulpader, O.A. Sabah, H.S. Abdullah, Impact of flexibility principle on the efficiency of interior design, Int. Trans. J. Eng. Manag. Appl. Sci. Technol. 3 (5) (2014) 195–212.
[7] I.M. Rian, M. Sassone, Flexible housing, a healthy housing: a brief discussion about the merits of flexibility in designing healthy accommodation, in: Proceedings of the 2nd International Conference on ‘Inhabiting the Future’, ABITARE, Napoli, Italy, 1–6, 12–13 December, 2012.
[8] B.F. Ogunbayo, A.M. Ajae, O.T. Alagbe, K.E. Ogundipe, P.F. Tunji-Olayeni, A.O. Ogunde, Residents’ facilities satisfaction in housing project delivered by Public Private Partnership (PPP) in Ogun state, Nigeria, Int. J. Civ. Eng. Technol. 9 (1) (2018) 562–577.
[9] E.O. Ibem, P.A. Opoko, E.B. Aduwo, Satisfaction with neighbourhood environments in public housing: evidence from Ogun State, Nigeria, Social Indic. Res. 130 (2) (2017) 733–757.
[10] H.I. Okagbue, A.A. Opanuga, P.E. Oguntunde, P.O. Ugwoke, Random number datasets generated from statistical analysis of randomly sampled GSM recharge cards, Data Brief 10 (2017) 269–276.
[11] S.A. Bishop, E.A. Owoloko, H.I. Okagbue, P.E. Oguntunde, O.A. Odetunmibi, A.A. Opanuga, Survey datasets on the externalizing behaviors of primary school pupils and secondary school students in some selected schools in Ogun State, Nigeria, Data Brief 13 (2017) 469–479.

[12] A.O. Afolabi, R.A. Ojelabi, A. Bukola, A. Akinola, A. Afolabi, Statistical exploration of dataset examining key indicators influencing housing and urban infrastructure investments in megacities, Data Brief 18 (2018) 1725–1733.

[13] L.M. Amusan, A. Afolabi, R. Ojelabi, I. Omuh, H.I. Okagbue, Data exploration on factors that influences construction cost and time performance on construction project sites, Data Brief 17 (2018) 1320–1325.

[14] C.O. Iroham, H.I. Okagbue, O.A. Ogunkoya, J.D. Owolabi, Survey data on factors affecting negotiation of professional fees between Estate Valuers and their clients when the mortgage is financed by bank loan: a case study of mortgage valuations in Ikeja, Lagos State, Nigeria, Data Brief 12 (2017) 447–452.

[15] A.O. Afolabi, R.A. Ojelabi, P.F. Tunji-Olayeni, O.I. Fagbenle, T.O. Mosaku, Survey datasets on women participation in green jobs in the construction industry, Data Brief 17 (2018) 856–862.

[16] R.A. Ojelabi, A.O. Afolabi, O.O. Oyeyipo, P.F. Tunji-Olayeni, B.A. Adewale, Data exploration of social Client Relationship Management (CRM 2.0) adoption in the Nigerian construction business, Data Brief 18 (2018) 1471–1476.

[17] P.F. Tunji-Olayeni, A.O. Afolabi, O.I. Okpalamoka, Survey datasets on occupational hazards on construction sites, Data Brief 18 (2018) 1365–1371.

[18] H.I. Okagbue, A.A. Atayero, M.O. Adamu, S.A. Bishop, P.E. Oguntunde, A.A. Opanuga, Exploration of editorial board composition, Citescore and percentiles of Hindawi journals indexed in Scopus, Data Brief 19 (2018) 743–752.

[19] H.I. Okagbue, A.A. Atayero, M.O. Adamu, P.E. Oguntunde, A.A. Opanuga, S.A. Bishop, Dataset and analysis of editorial board composition of 165 Hindawi journals indexed and abstracted in PubMed based on affiliations, Data Brief 19 (2018) 520–525.

[20] E.O. Ibem, E.B. Aduwo, U.O. Uwakonye, P.F. Tunji-Olayeni, E.A. Ayo-Vaughan, Survey data on e-Procurement adoption in the Nigerian building industry, Data Brief 18 (2018) 823–826.