

Using Appreciative Inquiry, Community Theatre and Collaborative Engagement to improve Environmental Sanitation Habits of People in Ibarapa, Oyo State, Nigeria

Abstract

The poor state of environmental sanitation in Ibarapa East Local Government area of Oyo State was worrisome. A three-phase intervention measures adopted for this study were appreciative inquiry questionnaire, awareness creation with community theatre and collaborative engagements with a review of the intervention measures that lasted for six months. Simple percentages and t-test statistics were used to analyse the questionnaire items. The post-field intervention results on the effect of the community theatre and collaborative intervention measures on environmental sanitation habits proved significant with $t_{(2.145)} = 5.276, P < 0.05$ and $t_{(2.145)} = 4.031, P < 0.05$ respectively. It was therefore recommended that while appreciative inquiry is desirable to re-awaken peoples' sense of situation analysis on environmental sanitation, the community theatre is needed to fire their imagination and thought in the right direction while collaborative engagements using participant models would motivate the people into action.

Introduction

It is generally observed that one of the pervasive challenges facing most poverty ridden nations of the world is environmental abuse. Nigeria is ranked as 134 out of 178 nations in environmental friendliness ranking in the world with a score of 39.20% in 2014 and 3.73% ten – year change (Hus, 2015). The commonest environmental abuse in Nigeria and elsewhere is environmental pollution through poor environmental sanitation habits. This is noticeable in communities comprising of Eruwa, Lanlate, Maya, Agasa, Akolu, Apanpa, Okele, Owewe and Obaseeku in Ibarapa East Local Government Area of Oyo State, Nigeria. According to Ogundele

27 (2014), the outcrops, bushes and rivers near residential areas in the communities were greatly
28 abused by turning them into dumpsites for refuse and human excreta (see Plates 1, 2 and 3).

29 Ogundele's findings further revealed that 56% of the sewage in the communities were disposed
30 into the bush around residential areas. More of the findings revealed that there was "laissez –
31 faire" attitude on the part of the people towards dumping of refuse with 28.25% burning their
32 waste within their residential environment, 26.68% disposing their waste in unkempt
33 dumpsites/landfills while 45.07% disposing theirs indiscriminately in both drainage/open space
34 and streams/rivers (Ogundele, 2014: 12).

35 Although the attendant consequences of these unwholesome lackadaisical attitude in
36 environmental abuse has not been well documented but Ogundele reported that wide outbreak of
37 diseases like typhoid fever, dysentery, diarrhea, cholera, yaws etc. had been recorded in the
38 recent past. Nevertheless, his findings revealed that poor environmental sanitation attitude is
39 apparent in the communities due to lack of peoples' mobilization, consultation and involvement
40 in environmental sanitation and waste management programmes. This is why the application of
41 appreciative inquiry, community theatre and collaborative engagements were necessary to
42 positively change the attitude/ habits of the people of Ibarapa East Local Government Area of
43 Oyo State towards good and sustainable environmental sanitation.

44 **Objectives of the Project**

45 Consequently, the objectives of this project were:

- 46 • To use appreciative inquiry to increase the awareness of the people of Ibarapa East Local
47 Government Area of Oyo State on poor environmental sanitation in their locality.
- 48 • To stage community theatre on the need to change the peoples' attitude towards good
49 environmental hygiene in the communities.

- 50 • To use collaborative engagements to promote good sanitation habits in order to achieve
51 2030 Sustainable Development Goals (SDGs) of:
52 (a) ensuring healthy living and well-being,
53 (b) ensuring sustainable management of sanitation for all, and
54 (c) make cities and human settlements inclusive, safe, resilient and sustainable (UN,
55 2015), in Ibarapa East Local Government Area of Oyo State.

56 **Hypotheses**

- 57 1. There is no significant difference between the pre and post-attitude of the people of
58 Ibarapa towards environmental sanitation.
59 2. There is no significant difference between the pre and post-impact of community theatre
60 on Ibarapa peoples' environment habits.
61 3. There is no significant difference between pre and post-impact of collaborative
62 engagements on Ibarapa peoples' environmental habits.

63 **Literature Review**

64 Environmental sanitation refers to good and sustainable living within the environment.
65 Referring to the Federal Republic of Nigeria (2005) on Environmental Sanitation (ES) policy,
66 Ikeke (2014) submitted that ES can be defined as the principles and practice of effecting
67 healthful and hygienic conditions in the environment to promote public health and welfare,
68 improve quality of life and ensure a sustainable environment.

69 WHO (2006) as noted by Ogundele (2014), Owoeye and Adedeji (2013) observed a
70 strong relationship between health and the environment such that the quality of an environment
71 has great impact on the health status of the individual within the environment. Earlier Nwankwo
72 (2004) has revealed that the objective of ES is to create and maintain an environment that will
73 promote good health and prevent diseases (Anunonwu et al., 2009). This is why the global
74 attention on environmental issues for the past two decades according to Owoeye and Adedeji

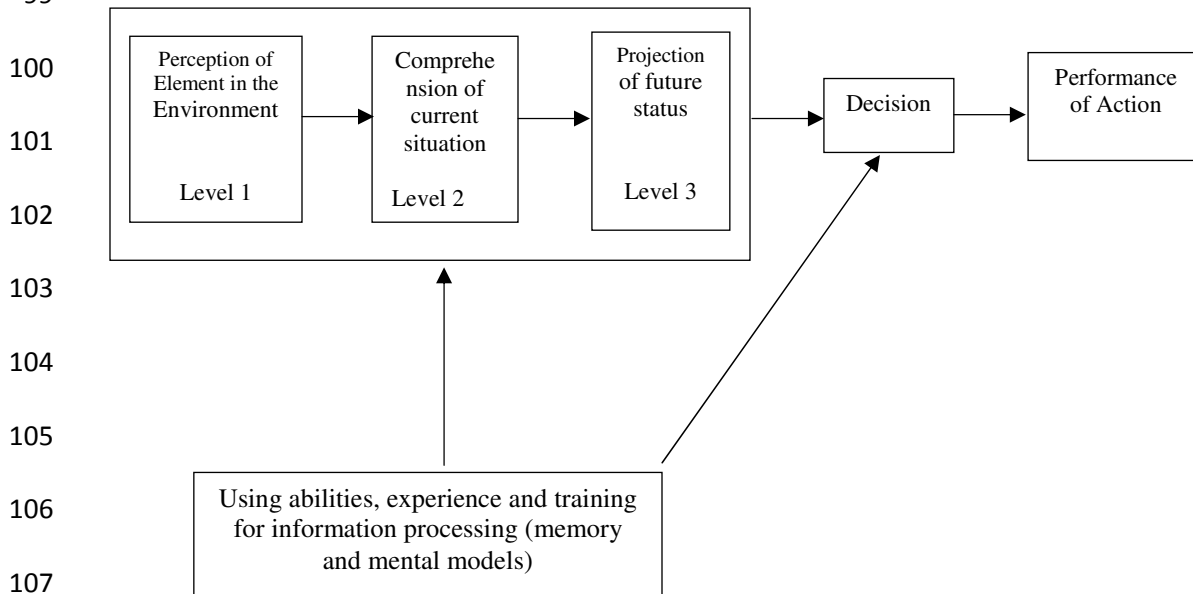
75 (2013) is “Green Agenda” which involves issues like the ozone layer depletion, global warming,
76 and the ‘Brown Agenda’ such as inadequate water supply, sanitation, drainage, solid waste
77 services, poor urban and industrial waste management as well as air pollution.

78 Researchers have proved that the ES problem in Nigeria needs both a change in
79 behaviour and collaborative engagement efforts (Mmom and Mmom, 2011; Ogundele, 2014,
80 Anijaobi-Idem, Ukata and Bisong, 2015). Supporting Mansaray, Ajiboye and Adu (1998);
81 Anijaobi-Idem et al (2015) suggested public environmental education and active involvement of
82 people in improving sanitation in Nigeria. Mmom and Mmom (2011) noted the need for
83 interventions to reduce peoples’ exposure to diseases by providing a clean environment in which
84 to live well and break the cycle of diseases. Therefore Ikeke (2014) calls for environmental
85 reorientation and practical efforts to eliminate dirty environment that has provided breeding
86 ground for mosquitoes, germs and other life-threatening organisms in Nigeria.

87 Two theories were used to guide the application of appreciative inquiry, community
88 theatre and collaborative engagements in this project. These are Situation Awareness (SA) and
89 Participant Modelling (PM) theories. According to Endsley (1988): Situation awareness is the
90 perception of elements in the environment within a volume of time and space, the
91 comprehension of their meaning, and the projection of their status in the near future (p. 36).
92 Indeed a person’s perception of the relevant elements in the environment as determined by
93 his/her senses forms the basis for his or her SA. Then action selection and performance will
94 proceed from SA. This process, according to Stanton, Chambers and Piggott (2001) follows that
95 a person’s working memory and mental models will draw from knowledge, skills and experience
96 to reflect and project to the world of sustainability. Consequently, as illustrated in figure 1, it is

97 hypothesized that SA is a function of individual’s information – processing mechanisms,
 98 influenced by innate abilities, experience and training (Endsley, 1995).

99 **Situation Awareness**



108 **Figure 1:** Situation Awareness adapted from Endsley 1995:35

109 On the other hand, participant modelling is a construct drawn from social learning theory.
 110 According to Bandura (1965) participant modelling (PM) is an observational learning strategy
 111 guided by performance – based treatments. In the view of Rosenthal and Bandura (1978), P.M.
 112 makes individual to acquire new patterns of behaviour and coping strategies through initiation of
 113 role models and positive incentives.

114 Prime (2011) identified the process of participant modelling to include the following:

- 115 • A collective review of evidence supporting the intervention. This is known as the
 116 debriefing process.
- 117 • Reviewing intervention rationale to include its potential benefits with the implementers.
- 118 • Deciding the order to model the intervention steps using “implementation scenario” in the
 119 presence of the participants.

- 120 • Gather materials needed for the participant modelling, using written list of target
- 121 intervention steps, items needed to practice and tangible reinforces.
- 122 • Make demonstration and continue the guided practice until the implementers have
- 123 mastered each intervention step.
- 124 • Allow implementers independent practice with provision for success reinforcement and
- 125 errors correction.
- 126 • Discuss skill generalization, monitor the intervention actions and discuss the feedback.

127 In a review of evidence – based literature on participant modelling, Adetoro (2014)

128 discovered that collaborative engagement is a product of social learning. According to him,

129 Ademolekun (1987) discovered that P.M. allows social learning process to include initial

130 observation of a model, the performance of a graded series of tasks with the assistance of model

131 at a carefully spaced intervals, and a gradual phasing-out of supportive aids, leaving the

132 individual progressively dependent on his or her own efforts. In other words, such strategy would

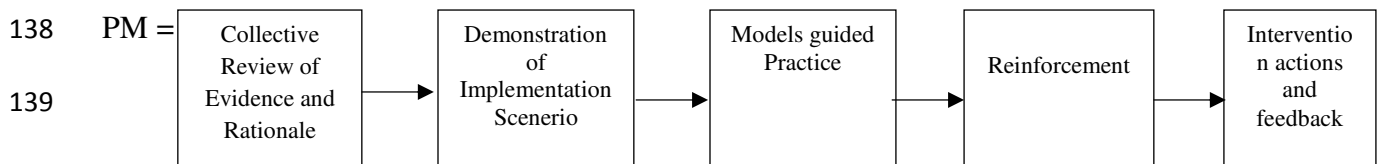
133 enable the individual to develop “a sense of self-efficacy, the expectation that one can, by one’s

134 personal efforts, master situations and bring about desire outcomes in a group” (Ademolekun,

135 1987: 203). These are what Jerkins (2006) and Kester (2007) called preparation for “pedagogies

136 of engagement” which are to promote community values and practices of sharing, caring and

137 fellowship.



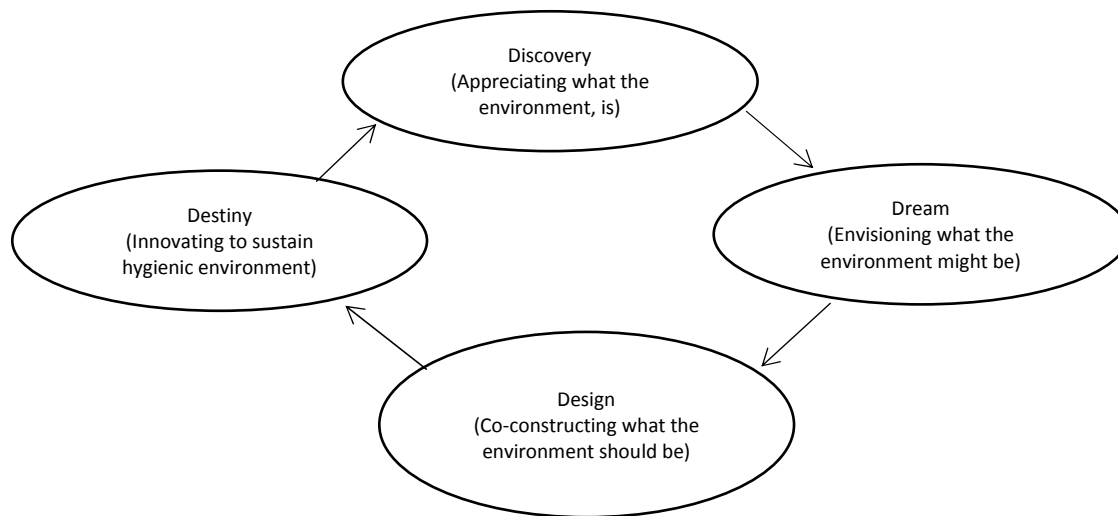
140 **Figure 2:** Participants Modelling adapted from Bandura (1965).

141 In order to achieve situation awareness in this project, appreciative inquiry strategy is

142 desirable. As a strategy to improve social practice, A.I. involves art and practice of asking

143 questions that strengthen a system’s capacity to apprehend, anticipate and heighten positive
 144 potential of a group of people to discover, dream, design and deliver solutions to their
 145 environmental problems (The Centre for Appreciative Inquiry, 2011).

146 AI according to Cooperrider and Whitney (2001), has “4-D” cycle including discovery
 147 stage that involves appreciating what the environmental situation is; dreaming stage involving
 148 the envisioning of what the environmental situation might be if certain actions had been taken;
 149 designing stage which involves dialogue about what the environmental situation should be (co-
 150 constructing stage) and destiny stage which involves innovating what will be through
 151 empowerment, adjustment and improvisation to execute the proposed design for sustaining
 152 hygienic environment (see figure 3).



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Figure 3: Appreciative Inquiry “4-D” cycle adapted from Cooperrider and Whitney (2001: 30).

159 Community theatre for hygienic attitude on the other hand, is to serve as a dramatic
 160 reflection of the appreciative inquiry. This is why theatre is a direct reflection of the yearning of

161 the people in order to find expressions and solutions to life-threatening problems (Akoshoro,
162 Kayode & Hussein, 2010). Theatre also helps to expose moral evils in human attitudes and
163 behaviour by interpreting historical trends and clarifying future needs and conditions (Komolafe,
164 2012). It does this by raising the level of consciousness of the people and leading them into
165 community participation drawing extensive inputs from members of the community, the
166 facilitators and other stakeholders in the development initiatives (Komolafe, 2012 citing Clifford,
167 1982 & Sharma, 2006). It is a problem-solving performance oriented process to galvanise a
168 community to action for solving environmental problem. Consequently, this study applied
169 community theatre as one of the strategies to improve the environmental sanitation habit of the
170 people of Ibarapa because “it is he who wears the shoe that can tell where it pinches” (Rasheed,
171 n.d: 180). The title of the specific community theatre so acted was on hygiene called ‘Imo-to-to’
172 and it followed six stages thus:

- 173 1. Script writing by an expert in community theatre.
- 174 2. Participant Actors selection from Ibarapa people with their local dialect.
- 175 3. Script discussion with the participant actors.
- 176 4. Rehearsals of the drama facilitated by the script writer.
- 177 5. Scenario acting in the selected town halls in Lanlate, Eruwa and Maya.
- 178 6. Review of the theatre gains by audience answering the Community Theatre
179 Environmental Sanitation Habit Questionnaires (CTESHQ).

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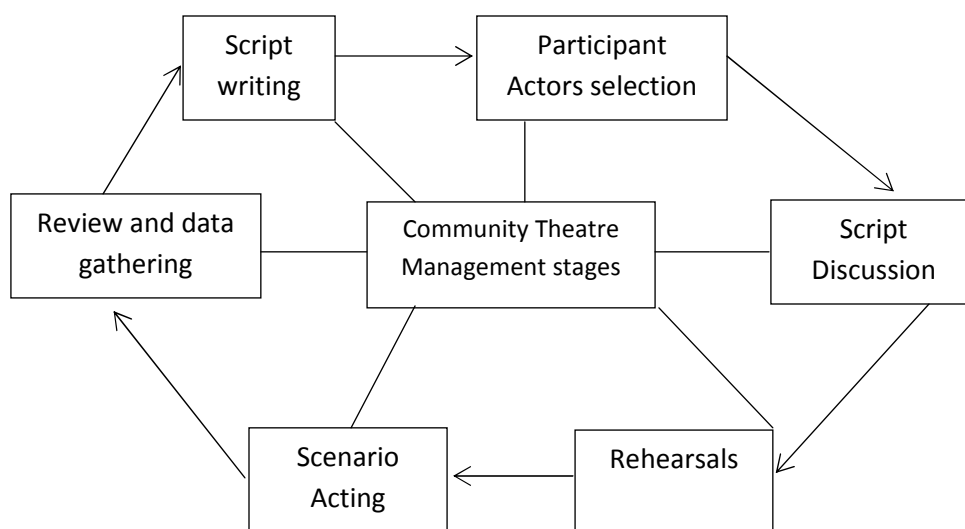
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184 The six stages of the community theatre management can be diagrammatically illustrated thus:

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194 **Figures 5:** Community Theatre Management Stages

195 **Source:** Adapted from Komolafe (2012).

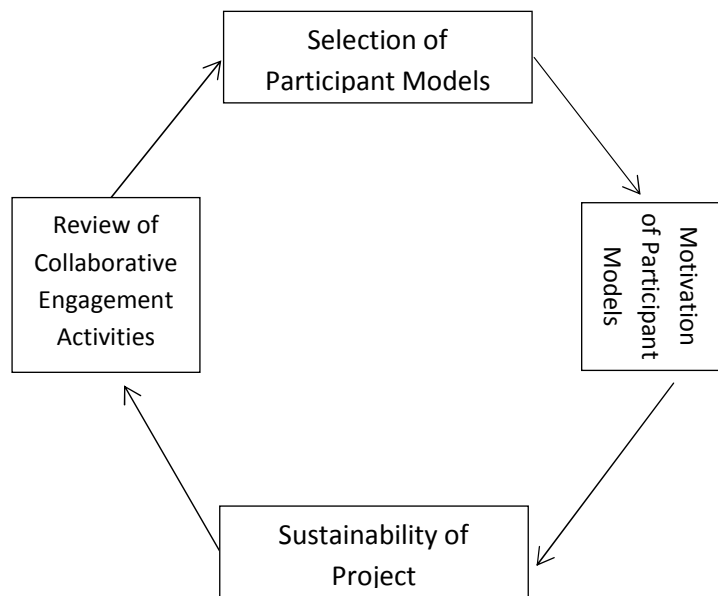
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197 Collaborative Engagement however, is a partnering process through which individuals, groups
198 and organizations have the opportunity to become actively involved in a project or programme of
199 activity (Adetola, Goulding and Liyanage, 2011). According to the United Nations Environment
200 Programme Finance Initiative (UNEP, FI, 2013), Collaborative Engagement is a process of
201 collective fresh looking at things with the hope of getting new ideas to test different approaches
202 and skills to engagement in order to get better results. Thus, C.E is widely acknowledged by
203 experts as an increasingly important efficient vehicle for waste disposal and management (Shen
204 & Wu, 2005 cited by Adetola et al, 2011).

205 Radtke (2014) opined that the effectiveness of collaborative initiatives depends on civic
206 participation, cross – sector collaborations, trust and commitment, social networking, ownership
207 structures, hands on installation and maintenance by the stakeholders. This civic engagement is
208 based on promotes the idea of green citizenship that environmental friendliness (Radtke, 2014
209 citing Devine-Wright, 2007 and Seyfang, 2007).

210 In practical sense however, the Association of Information and Image
 211 Management (2015) adapted model of Collaborative Engagement (see figure 4) shall be applied
 212 for intervention measures in this project. It involves four cyclical steps thus:

- 213 • Selection of participant models for intervention activities.
- 214 • Motivation of participant models in the intervention activities.
- 215 • Sustainability of the project through constant mobilization efforts of the participant
 216 models.
- 217 • Review of Collaborative Engagement activities among all the stakeholders and
 218 participant models (Using collaborative engagement questionnaire in appendix III)



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 229 **Figure 4: Collaborative Engagement Life – Cycle**

230 **Source:** Association of Information and Image Management (2015): 4.

231 **Methodology**

232 **Research Design**

233 This action research adopted a three phase intervention strategies using appreciative
 234 inquiry, community theatre and collaborative engagements in improving peoples’ environmental

235 sanitation habit at Lanlate, Eruwa and Maya towns in Ibarapa East Local Government, Oyo
236 State.

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238 **Area of Study**

239 Lanlate, Eruwa and Maya serve as commercial centres in Ibarapa East Local Government
240 Area of Oyo State lying between longitude 3⁰ 15 and 3⁰ 35' East and latitude 7⁰ 25' and latitude
241 7⁰ 25' North of the equator. They are located in tropical climatic belt with a mean annual
242 temperature of 27^{0C} (an annual range of 8^{0C}) and a yearly rainfall of between 150cms and
243 200cms from April to September every year (Udo, 1970).

244 **Population of Study**

245 According to Ogundiran, Obanisola and Adebisi (2012), Eruwa has a population of
246 30,659; Lanlate 12,996, and Maya 1405 (judging from 2006 population census) with Ibarapa
247 Polytechnic at Eruwa, Emmanuel Alayande College of Education, Oyo Lanlate campus and the
248 five-daily marketing at Maya significantly contributing to the daily increase in the population of
249 the localities (45,060 out of 118,226 people).

250 **Samples and Sampling Techniques**

251 A total samples of 450 adults (including the three kings, fifteen chiefs, one local
252 government chairman, three health officers and three sanitary inspectors) were randomly
253 selected from the three communities (Eruwa, Lanlate and Maya) for the study. They were
254 involved in answering Appreciative Inquiry Questionnaires, participated in community theatre
255 and 15 of them (that were well trained) served as the Participant Models in collaborative
256 engagements. Furthermore, sixteen Research Assistants were engaged for the administration of
257 the questionnaires.

258 Instrumentation and Validity Test

259 The questionnaire items on appreciative inquiry, community theatre and collaborative
260 engagements in environmental sanitation were validated by two Geographers and a Social
261 Studies Educator who after their moderations confirmed their face validity. Furthermore, after
262 two weeks of interval on pilot questionnaires' administration on twenty adult members (who
263 were not part of the samples) in the three localities, a correlation index of Pearson $r = 0.67$ was
264 obtained.

265 The Intervention Actions

266 The intervention measures which lasted 20 weeks included:

267 1st Intervention Phase

268 Using questionnaire on appreciative inquiry adapted from Cooperrider and Whitney
269 (2001); Mohr and Watkins (2002) to make people become more aware and appreciative of the
270 poor environmental sanitation in Eruwa, Lanlate and Maya areas of Ibarapa, dream the preferred
271 future environment, design the preferred future environment and innovate and improvise ways to
272 create the preferred future environment.

273 2nd Intervention Phase

274 Participant Actors were selected for the community theatre, script discussions made,
275 rehearsals of the drama facilitated by the script writer, followed by scenerio acting in the selected
276 town halls in Lanlate, Eruwa and Maya with the review of the theatre gains by the audience.

277 3rd Intervention Phase

278 Collaborative Engagements as adapted from Association of Information and Image
279 Management (2015) was undertaken to motivate the Participant Models to evacuate the existing
280 scattered wastes from their present location to the new dumpsites and clear the blocked

281 drainages. Health Officers were also admonished to follow-up the collaborative engagements in
 282 the localities. After 3-months, the Participant Models were engaged in evaluating the project.

283 **Method of Data Analysis**

284 The section A and B of the Appreciative Inquiry Questionnaires on Environmental
 285 Sanitation Habit (AIQESH), Community Theatre Environmental Sanitation Habit (CTESH) and
 286 Collaborative Engagements in Environmental Sanitation (CEES) were analysed with frequency
 287 counts and percentages while items on pre and post attitude of the people to environmental
 288 sanitation, impact of the community theatre and impact of the collaborative engagements’ ratings
 289 on 4-Likert scales by the Participant Models were analysed with t-test statistics (using the 17.0
 290 version of Statistical Package for Social Sciences – SPSS).

291 **Test of Hypotheses**

292 **HO₁:** There is no significant difference between the pre and post-attitude of the people of
 293 Ibarapa towards environmental sanitation.

294 **Table 2: T-test Analysis on the pre and post –attitude of Ibarapa people on environmental**
 295 **sanitation.**

Categories	N	X	SD	Df	t-cal	t-tab	Decision
Post-Attitude sanitation	15	3.00	0.65	14	5.880	2.145	Sig
Pre-Attitude on sanitation	15	1.53	0.52				

296 $t_{(2.145)} = 5.880, p < 0.05$

297 As can be seen in table 2, there exists a significant difference in the pre and post attitude
 298 of the people of Ibarapa towards environmental sanitation. This is because the calculated t-score
 299 of 5.880 is greater than the table value of 2.145 at P=0.05. This as rated by the participant models
 300 (PM) indicates that as at the end of the experiment, the people gained a positive attitudinal
 301 change score of 1.47.

302 **HO₂**: There is no significant difference between the pre and post-impact of community theatre
 303 on Ibarapa peoples’ environmental sanitation habits.

304 **Table 3: T-test Analysis on the pre and post-impact of community theatre on Ibarapa**
 305 **Peoples’ Environmental Sanitation Habits.**

Categories	N	\bar{x}	SD	df	t-cal	t-tab	Decision
Post-Community Theatre Impact	15	3.13	0.92	14	5.276	2.145	Sig
Pre- Community Theatre Impact	15	1.60	0.74				

306 $t_{(2,145)} = 5.276, P < 0.05$

307 The result in Table 3 reveals a significant impact of community theatre on Ibarapa
 308 peoples’ environmental sanitation habit because the calculated t-value of 5.276 is greater than the
 309 table-value of 2.145. Hence, there is a significant difference between the pre and post
 310 environmental sanitation habits of the people based on community theatre engagements.

311 **HO₃**: T-test Analysis on the pre and post impact of collaborative engagements on Ibarapa
 312 Peoples’ Environmental Sanitation Habits.

313 **Table 4: T-test Analysis on the Pre and Post impact of collaborative engagement on**
 314 **Ibarapa Peoples’ Environmental Sanitation Habits.**

Categories	N	\bar{x}	SD	Df	t-cal	t-tab	Decision
Post-Collaborative Engagement Habits	15	3.33	0.49	14	4.031	2.145	sig
Pre- Collaborative Engagement Habits	15	2.07	1.10				

315 $\therefore t_{(2,145)} = 4.031, P < 0.05$

316 As can be seen from Table 4, there is a significant difference between the pre and post-
 317 impact of collaborative engagements on Ibarapa peoples’ environmental sanitation habits
 318 because the calculated t-value of 4.031 is greater than the table value of 2.145 at 0.05 significant
 319 level. Hence, the null hypothesis is hereby rejected.

320 Discussion

321 The three research hypotheses that were tested in this project proved significant in
322 outcomes. First, there was a significant difference between the pre and post-attitude of the people
323 towards environmental sanitation. Initially, the people seemed indifferent to their environmental
324 sanitation habits with them raising concern about the locality's environmental sanitation habit
325 (96.7%), noticing drainage blockages (67.8%), noticing littering of ground with refuse (69.7%)
326 and disposing of refuse in public bays with human excreta (74.6%). However, the post-attitude
327 test revealed a positive improvement in the attitude of the people towards environmental
328 sanitation habit with an increased mean score of 1.47 i.e. 3-1.53 (see table 2). This positive
329 attitudinal change is in line with the theory of Kessler (2013) that appreciative inquiry usually
330 result in better, more effective, convivial and sustainable environmental system because people
331 will be able "to discover, dream, design and deliver solutions to their environmental problems"
332 (Cooperrider & Whitney, 2001 and The Centre for Appreciative Inquiry, 2011). It also aligns
333 with the principle of constructionism where people construct the environment they inhabit
334 (Wikipedia, 2015).

335 The second significant result was on the impact of community theatre on the peoples'
336 environmental sanitation habits. According to the finding, the mean score difference between the
337 pre-community theatre experience and the post-community theatre experience was 1.53 with a t-
338 calculated score of 5.276 (see table 3). This is in line with the submission of Idogho (2013) that
339 community theatre is a "direct reflection of the yearning of the people in order to find
340 expressions and solutions to life threatening problems" (Akoshoro, Kayode & Hussein, 2010). It
341 is also for clarifying future needs and conditions (Komolafe, 2012), calling people to action for
342 better future (Idogho, 2013).

343 The third significant outcome was the impact of collaborative engagements such as using
344 the participant models to mobilize the community people to clear the blocked drainages, the
345 littered refuse garbages and digging of new dump sites far away in the bush. The mean score
346 difference between the pre – collaborative stage and the post – collaborative stage was 1.26 with
347 a t-test value of 4.031 proving significant at 0.05 level of probability. This result is in line with
348 the findings of Shen and Wu (2005) in the works of Adetola et al (2011) that collaborative
349 engagement is an efficient vehicle for waste disposal and management. It is also in tandem with
350 the submission of Radtke (2014) citing Devine – Wright (2007) and Seyfang (2007) that
351 collaborative initiative is a civic engagement that promotes ‘green citizenship and environmental
352 friendliness’.

353 **Recommendations**

354 Judging from the outcomes of this study, it is hereby recommended that:

- 355 - Appreciative Inquiry using series of structured questionnaire items and interview
356 questions is essential to create environmental situation awareness. This would lead to
357 perception of the elements in the environment, comprehension of a poor state of
358 environmental sanitation, projection of a desired future status and a ready – stage for
359 collaborative action.
- 360 - Community theatre is desirous for calling peoples’ attention to an unhygienic
361 environmental sanitation habit with the hope of gingering peoples’ mind to correct the
362 situation. It is also required to call peoples’ attention to the consequences of their poor
363 environmental sanitation habit in order to fashion a better attitude.
- 364 - Collaborative engagement for environmental sanitation should be fashioned along
365 Bandura’s social learning theory, using participant models to facilitate the right

366 environmental sanitation behaviour in the community. This is to “let the trained
367 environmental sanitation models teach others so that others can also do it well”. It is
368 therefore essential that collaborative engagement for environmental sanitation requires a
369 lot of incentives and tools such as provision of motorized refuse bays, shovels, rakes,
370 diggers etc. for clearing garbages in the community.

371 - Some Environmental Sanitation Participant Models (ESPM) are required to be selected
372 and trained from each wards and they are to be attending quarterly meetings with the
373 local government Health Officers in order to build-up a good synergy for good
374 environmental sanitation.

375 - Health Officers are admonished to be more alive to their responsibilities of regularly
376 visiting the communities to enforce environmental sanitation compliance. Adequate
377 vehicles with generous allowances should be provided for the health officers in order to
378 motivate them to perform their duties well.

379 - Regular advocacy programmes are needed in the communities on good environmental
380 sanitation habits and hygienic living.

381 - There is an urgent need for construction of more public toilets since most of the
382 communities are made – up of low – income earners in the rural sector and many of the
383 houses have no toilets. This can be done through public – private partnership as people
384 indicated their willingness to pay for the toilet services. Indigenous and outside
385 philanthropists can also be invited to the communities to donate modern public toilets to
386 be managed for the communities by the environmental sanitation participant models.

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388

389 **Conclusion**

390 There is no doubt that health is wealth and most of the contagious diseases emanate from
 391 poor environmental sanitation. However, the use of appreciative inquiry combined with
 392 appropriate community theatre and environmental sanitation collaborative engagements is a
 393 necessity to improve environmental sanitation habits in Nigeria. Indeed, when community people
 394 are sensitized to their poor environmental sanitation situation with a reflecting drama, they are
 395 most likely to be willing to change their habits positively. Hence, it is essential that all and
 396 sundry must be called to action through collaborative initiatives to build a culture of good
 397 environmental sanitation in Nigeria.

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