

Title: Working with Ugly Dataset: Insightful Visualisation from WashApp Data

Name: **Serifat Folorunso**



[Serifat Folorunso](#)



[Serifat Folorunso](#)

Host org website link: [IDEMS INTERNATIONAL](#)

Background

What is Water, Sanitation and Hygiene App?

Featuring 12 modules worth of content related to improving a user's water, sanitation and hygiene behaviours. It is the control app to the **ParentApp for Teens in Tanzania** RCT for the Global Parenting Initiative and developed by INNODEMS as well as IDEMS International along with other research institutions.

Objectives

- To find the users engagement of this app. This plays a crucial role in the growth of any app.
- Analysis of WASH App Data**
- Methodology : Data Visualization & Dashboard**
- Software: RInstat & R-Shiny Dashboard**

Findings

The analysis showcase user's engagement of the app. The percentage of Module Completion rate, section Complete rate and Module toggle rate across the 12 modules in the app.



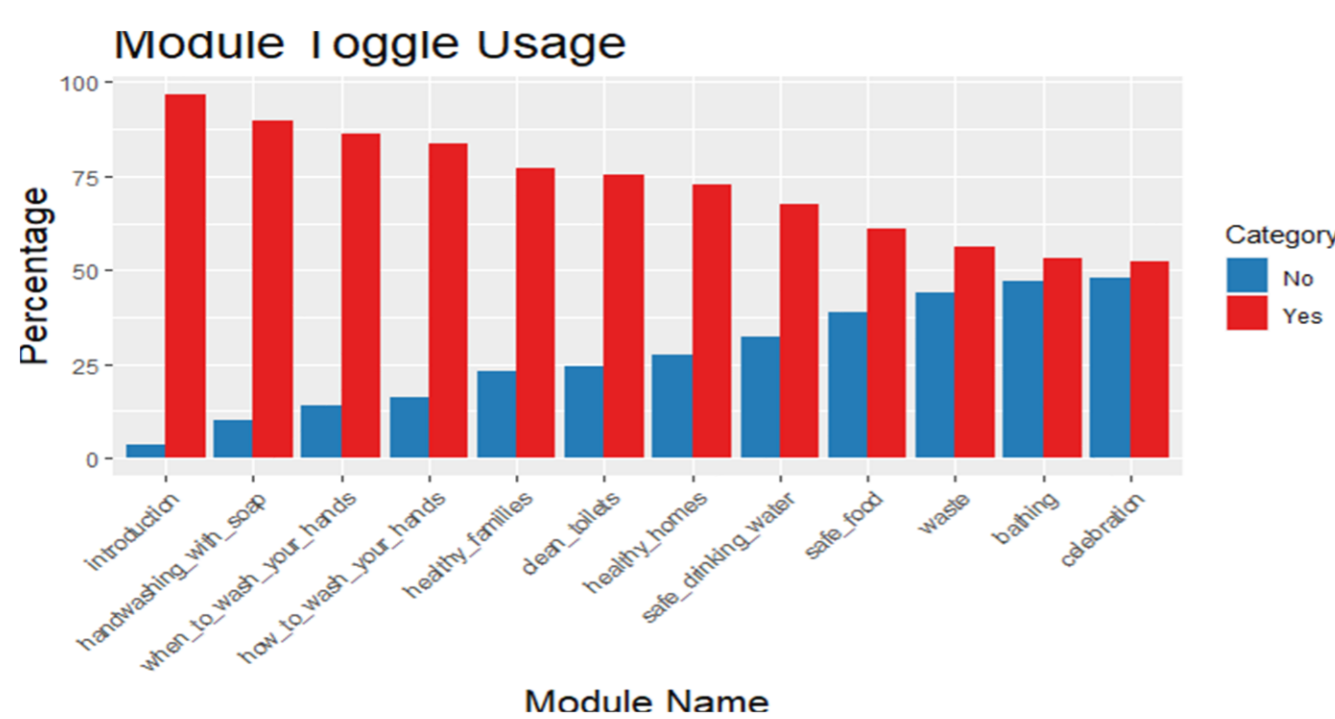
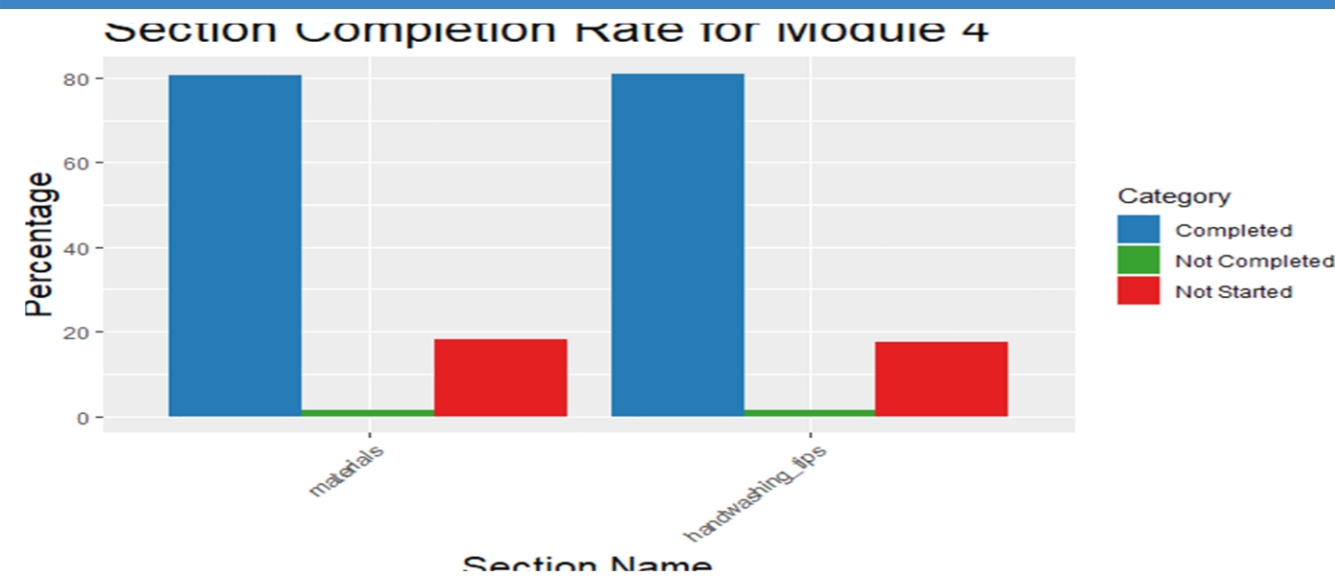
Source: <https://wash.web.app/>

Table 1: Module Completion Rate

Module_ID	Module_Name	Completed	Not Completed	Not Started
1	introduction	94.39103	4.647436	0.961538
2	handwashing_with_soap	83.65385	15.54487	0.801282
3	when_to_wash_your_hands	80.76923	18.42949	0.801282
4	how_to_wash_your_hands	78.84615	20.35256	0.801282
5	healthy_families	66.34615	32.85256	0.801282
6	clean_toilets	68.58974	30.44872	0.961538
7	healthy_homes	66.82692	32.21154	0.961538
8	safe_drinking_water	60.89744	38.14103	0.961538
9	safe_food	53.84615	45.19231	0.961538
10	waste	50.96154	48.07692	0.961538
11	bathing	46.79487	52.24359	0.961538
12	celebration	43.42949	55.60897	0.961538

Table 2: Module Card Click

Module_ID	Module_Name	Clicked	Not Clicked
1	introduction	98.23718	1.762821
2	handwashing_with_soap	95.35256	4.647436
3	when_to_wash_your_hands	91.02564	8.974359
4	how_to_wash_your_hands	89.26282	10.73718
5	healthy_families	85.41667	14.58333
6	clean_toilets	82.85256	17.14744
7	healthy_homes	80.44872	19.55128
8	safe_drinking_water	78.20513	21.79487
9	safe_food	74.67949	25.32051
10	waste	66.1859	33.8141
11	bathing	65.54487	34.45513
12	celebration	72.4359	27.5641



Summary/Conclusion

In Summary, the analysis output provides valuable insights into user engagement with each module, helping to identify popular modules and potential areas for improvement. This information can be used to optimise the user experience, focus on modules that are highly engaging, and encourage more users to explore and interact with specific modules to enhance the overall effectiveness of the WASH App.

References

- https://en.wikipedia.org/wiki/Hand_washing
- <https://sendbird.com/blog/mobile-app-engagement-metrics>
- Gasteiger N, Dowding D, Ali SM, Scott AJS, Wilson P, van der Veer SN. Sticky apps, not sticky hands: A systematic review and content synthesis of hand hygiene mobile apps. J Am Med Inform Assoc. 2021 Aug 13;28(9):2027-2038. doi: 10.1093/jamia/ocab094. PMID: 34180527; PMCID: PMC8363789.

Wider Implications/Benefit to healthcare

- Minimising the spread of influenza, COVID-19, and other infectious diseases
- Preventing infectious causes of diarrhea
- Decreasing respiratory infections
- Reducing infant mortality rate at home birth deliveries
- Removing germs from hands, which helps prevent infections
- Reducing deaths from diarrheal disease by up to 50% if everyone routinely washed their hands

Acknowledgement

<https://www.idems.international/our-team/>