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Improving Organizational Training: A Case of a Financial Regulator in Africa

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Abstract:
The aim of this study "Improving organizational training" is to unfold facts that 2-5 days of training duration is not sufficient for understanding concepts taught to employees. The method adopted here was using a simple training program as a pilot to collect data and assess the level of performance towards the training target. Data collected included rating employees' competence before and after the training, rating the facilitator's competence by themselves, and the employees. We tested the following assumptions; that the employee's competence rating before and after the training are significantly different; that the employee's competence after the training is significantly different from the target competence rating, and that the employees rating of the facilitator's competence is significantly different from the facilitators rating. The result showed that participants made a 60% improvement in the proposed competence but did not achieve the target score of the competence level aimed in alignment with the organization's strategic competence capability. The cost-benefit analysis showed that the organization studied was losing NGN 45,000 on each participant based on the rating participants achieved at the end of the training. With these facts, we concluded that organizations should redefine their training methods to a minimum of 4 weeks by incorporating repeated learning of the skill so an employee's brain can condition its neural paths to understand and use the skill to be effective.

Keywords: *Training, improvement, organization and competencies*

1. Introduction

It is a known fact that training employees add to the organization's improvement (Adelere, 2017; Adedoyin and others, 2018), and therefore organizations are investing a lot in training. Every organizational training intends to help employees acquired competence capabilities that will help them to be better at their tasks to achieve the corporate vision. The big question we need to answer is, are these training achieving their desired aim? It is hard to tell because learning in most global organizations is still considered intangible. So, it is hardly measured and accounted for in the financial records (yearly or quarterly). The challenge with organizational training is the subjectivity associated with measures. It is now clear that organizations need to expand accounting practices beyond the financial aspects to include the human capital areas, which are considered intangible.

Corporate training is one area in which organizations may need to find a way to measure and scientifically confirm it achieves desired goals. Great entrepreneurs like Peter Thiel (Peter, 2014) are pushing for a learning culture rather than the schooling and training focused culture, which means we should focus on people learning and ensuring understanding rather than just satisfied with short term training. Training is a short-term process that utilizes a systematic and organized procedure by which personnel learns technical knowledge and skills for a defined purpose (Adelere, 2017). The problem is that we have not determined this short-term duration, but if the training does not leave an employee with the skills necessary for the specified purpose, it has failed.

Corporate training of 2- 5 days duration has been called quick fixes (Franklin, 1991). Learning professionals have seen that these short durations do not allow people to understand the skill to creativity level (acquiring, organizing, and directing knowledge). Research has shown that it takes a minimum of 4 weeks to learn a skill and be creative (Jonacs, 2007). Creativity comes from knowing with insightful understanding, so employees may need to understand the concepts given to them to be creative and improve what they have learned in line with their environmental variables. Aristotle, one of the greatest philosophers who existed in the 14th century, had said that to understand anything, we may need to ask questions like; why was it created? When was it started, what was to make it? What has changed? (Harwood, 2012) and these questions are directed to stimulate the mind for reasoning and thinking. The human brain learns with repetition and association. This conditions the neural path of the brain to understand and keep to memory what we know. To understand and redefine learning methods that work, we may need to consider the human brain design because the brain takes in

these learning given to humans. It unveils the fact that trainers need to teach how employees' neural paths will understand what they are teaching, and this should take some time greater than the regular 2- 5 days duration.

In the 21st century, we should have gotten to the stage where organizations should account for the funds it invests in training and understand if they are achieving the desired results and, if not, what improvements to take. The era of assumptive decisions is over, and in this era, organizations should account for every cent it spends o training. This research paper may not be one of the first to identify these problems with organizational training as publications like Harvard Business Review (HBR, 2020) have addressed the transformational training methods in organizations to improve learning. In these transformational training methods, learning professionals are discovering that face to face learning methods of short duration is not enough for organizations, and they are combining them with online digital formats to assist people in learning repetitively. This paper aims at scientifically proving that the average 2- 5 days duration for training in an organization is not enough, and it also tries to develop a strategy based on the facts unfolded from the data analysis carried out. To achieve this goal, we would have the following objectives.

- To articulate three hypotheses and scientifically test them with real organizational training data, we believe it is the first step in scientific proof.
- To propose a strategy that we believe will work best for organizations to achieve the intent of their training.
- The hypothesis we would test in this research are:

1.1. We Will Test If the Competence Rating of Employees Before and After the Training Is Significantly Different. If the Means Are Not Equal, That Is, Employees Did Not Improve Significantly

- H_0 = the competence rating of the employees before and after the training, the training is not significantly different ($M_1 = M_2 = 0$). The employees did not make any significant improvements.
- H_1 = the competence rating of the employees before and after the training are significantly different ($M_1 \neq M_2$). The employees made significant improvements.

1.2. The Hypothesis to Test If the Rating of the Employee's Competence after the Training Are Significantly Different from the Proposed Target Competence Score

- H_0 = the competence rating of the employee after the training, are not significantly different from the proposed competence target score, ($M_1 = M_2 = 0$). They employees achieved the competence target score for the training.
- H_1 = the competence rating of the employee after the training is significantly different from the proposed competence target score ($M_1 \neq M_2$). The employees did not achieve the competence target score.

1.3. The Hypothesis to Test If the Facilitators Who Handle the Training Are Competent

- H_0 = the facilitator's competence rating is not significantly different from the participant's rating of his competence; that is, their means are equal ($M_1 = M_2$). The facilitator is competent.
- H_1 = the facilitator's competence rating is significantly different from the participant's rating of his competence; that is, their means are not equal ($M_1 \neq M_2$). The facilitator is not competent.

2. Methodology

2.1. Study Organization

The study organization is a typical currency regulator in Africa with over 8000 and over 20 branches. The organization has a dedicated learning department that handles all its learning, and they also have a research department where their employees release highly rated research papers. The organization takes learning seriously as it has dedicated learning centers for training.

As consultants, we administered Performance Planning training to 90 staff. We used this training to test the hypotheses earlier stated; we design our data collection to answer questions like; competence employees were to acquire from this training. We were acknowledging the competence required to drive the organizational vision. We rated these competencies before and after the training. The employees that attended this training were the best staff (referred to as champions) in various departments with good performance management and appraisal knowledge according to their organization's standards.

2.2. Procedure

We identified three competencies participants were to acquire after undergoing these four days of training. These competencies were Teamwork and co-operation, planning and organizing, and goal and result oriented (see Tables 1 to 3). We then assessed to rate the level of employees on the selected competence proposed after the training. We distributed a structured questionnaire to the employees with some questions trying to identify their associative knowledge of performance planning and their understanding of the identified competencies.

The following were a summary of the questionnaires; 98% of the employees showed shallow knowledge of the performance planning concept. It was affirmed mostly with their set objectives as we found it immeasurable and not consistent with best practices of setting SMART goals.

The facilitator was rated based on a competency test (See Table 4 and an automated version at www.kbbafrica.com)

From the three identified competencies, the total maximum value expected of them is a score of 15. Table 5 shows a breakdown of employee competence ratings before and after the training and employee rating of the facilitator's competence.

After the training, we administered a project related to the employee's process. We used this project to rate the acquired competence from the training and how well the employee can use it to be more efficient and effective in their processes.

Teamwork and co-operation – show a genuine intention to participate and work cooperatively with others to pursue team goals.		
Score	**Attribute**	**Capability**
1	unsatisfactory	• Likes to work alone.
2	fair	• Shows genuine intention to work with others • Supports team decision • Does his share of Teamwork
3	good	• Shows sensitivity to the needs of team members. • Share information with team members • Speaks positively of team members
4	Very good	• Is aware of the different ability of team members • Always acts to promote a friendly climate, good morale, and co-operation. • Gives constructive criticism to team members to improve performance. • Advocates constructive arguments with facts
5	excellent	• Resolves team conflict • Gives credit to others publicly who has performed

Table 1: A Measure of the Competence of Teamwork and Co-Operation

Planning and organizing – plans, organized, and structure time in all organizational activities		
Score	**Attribute**	**Capability**
1	unsatisfactory	• Cannot organize the smallest activity to meet the target time
2	fair	• Prioritizes time scale • Meets deadlines • Adopts systematic approach to handling tasks • Set personal goals and objectives
3	good	• Thinks ahead and allocates enough time for tasks • Designs programs and project infrastructures needed to achieve goals • Budgets and allocates resources across multiple activities • Compares progress against plans and modifies where necessary
4	Very good	• Surpasses deadline expectation and delivers high quality. • Checks for accuracy of work, including those not within their immediate portfolio.
5	excellent	• Monitors and makes decisions to achieve operational goals.

Table 2: A Measure of the Competence of Planning and Organizing

Goal and result oriented – the extent to which employee act in ways to achieve, pursue and promote organizational goals		
Score	**Attribute**	**Capability**
1	unsatisfactory	• Shows the least conscious concern in achieving organizational goals.
2	fair	• Displays enthusiasm in the pursuit of goals • Motivate and improve performance. • Meets goal within an established time frame
3	good	• Is relentless in the pursuit of goals • Thoroughly searches for relevant data that facilitates achieving desired results. • Motivates self and others and creates its measure for excellence.
4	Very good	• Determines the importance of achieving some goals over the others
5	Excellent	• Incorporates good judgment to already existing information to facilitate the achievement of desired results.

Table 3: A Measure of the Competence of Goal and Result Oriented

Variable Assessed	Facilitators Claims	Rating (%)	Maximum Rating (%)
Experience	11-15 years	15	25
Education level	Ph.D.	15	15
Ability to lead people	You always go out of your way to support people in the right leadership knowledge by organizing forums and presentations.	20	20
Ability to effectively communicate	Understands various forms of communication and can draw up a different communication plan with a good understanding that communication successes are site-specific.	15	20
Ability to arouse enthusiasm in others	Talks people to taking actions even when their motivation towards such activity is shallow. People get moved internally about different subjects when they hear your speech.	10	20
Total general competence		85%	100%

Table 4: Facilitators Claimed Competence
An Automated Version of Competence Test in Www.Kbbafrica.Com)

Employee Identity Number	Rating before Training (Maximum Value=15)	Rating after Training Training (Maximum Value=15)	Employee Total Rating for Facilitator Competence (Maximum Value=100%)
1	3	5	95
2	3	6	90
3	3	6	75
4	3	5	75
5	3	6	85
6	3	5	85
7	3	6	80
8	3	6	75
9	3	6	75
10	3	6	80
11	3	6	95
12	3	6	95
13	3	6	95
14	3	6	75
15	3	6	85
16	3	6	80
17	3	6	85
18	3	5	75
19	3	4	85
20	3	4	90
21	3	6	95
22	3	4	95
23	3	4	95
24	3	4	85
25	3	4	75
26	3	6	85
27	3	7	85
28	3	5	80
29	3	6	75
30	3	5	85
31	5	6	90
32	6	5	85
33	3	5	95
34	3	5	85
35	3	5	75
36	3	6	85
37	3	7	85

Employee Identity Number	Rating before Training (Maximum Value=15)	Rating after Training Training (Maximum Value=15)	Employee total Rating for Facilitator Competence (Maximum Value=100%)
38	3	6	85
39	3	7	75
40	4	7	90
41	4	8	90
42	4	6	95
43	3	6	95
44	3	4	85
45	4	5	75
46	3	4	80
47	3	4	75
48	4	6	85
49	3	4	85
50	3	4	85
51	3	4	75
52	3	4	75
53	4	6	85
54	3	7	80

Table 5: Competence Rating of Employees Before and After the Training

After the training, we gave employees forms to access the facilitator's competence. They were also asked questions regarding their poor performance on achieving the proposed competence score (See Tables 6 and 7).

S/N	Indicators Assessed	Scores				
		5	4	3	2	1
1.	Knowledge of the subject matter	90%	10%			
2.	Ability to simplify the subject matter	95%	5%			
3.	Ability to effectively communicate the subject matter	95%	5%			
4.	Ability to motivate the participants to see the practical application of the subject matter	100%	0%			
5.	The positive attitude of the facilitator (s) during the lecture	95%	5%			
Very good – 5; Good – 4; Okay – 3; Bad – 2; Very bad – 1						

Table 6: Facilitators Assessment by Participants

	Indicators Assessed	Yes	No
1.	Short time duration to learn the course	100%	0%
2.	Course too complicated for me to learn	5%	95%
3.	Showed no interest because the course is not relevant to me	0%	100%
4.	What time duration would be enough for you to learn this course	10 days	10%
		15 days	15%
		20 days	70%
		30 days	10%

Table 7: Possible Reasons for Poor Performance on Achieving Competence Goal Proposed

3. Analysis

3.1. Descriptive Analysis

The first analysis carried out was a descriptive analysis aimed at having an overview of the data collected (see Table 8)

Data Category	Competence Rating before Training (target of 9)	Competence Rating after Training (target of 9)	Employees Total Rating of the Facilitator
Mean	3.20	5.4	84.2
Percentage of target proposed to achieve	35.6 %	60%	N/A

Table 8: Summary of Averages of Data Collected
N/A - Not Applicable

3.2. Test of Hypothesis

3.2.1. CASE 1

The second analysis carried out was at testing the first hypothesis; we used the Excel software to run a t-test of significant between the rated scores of the participants before and after the course (see results of the analysis in Table 9).

	Before Training	After Training
Mean	3.203704	5.444444444
Variance	0.316212	1.044025157
Observations	54	54
Pearson Correlation	0.16784	
Hypothesized Mean Difference	0	
df	53	
t Stat	-15.24	
P(T<=t) one-tail	2.57E-21	
t Critical one-tail	1.674116	
P(T<=t) two-tail	5.13E-21	
t Critical two-tail	2.005746	

Table 9: The Result of Analysis from Comparing Scores of Before and After Training

3.2.1.1. Interpretation

The test is a two-way test because we checked if the means are significantly different, and if there was a form of improvement in the employee rating. The computed t is greater than the critical t-statistics for a two-way test (2.006). Figure 1 shows a graphical representation of the hypothesis tested.

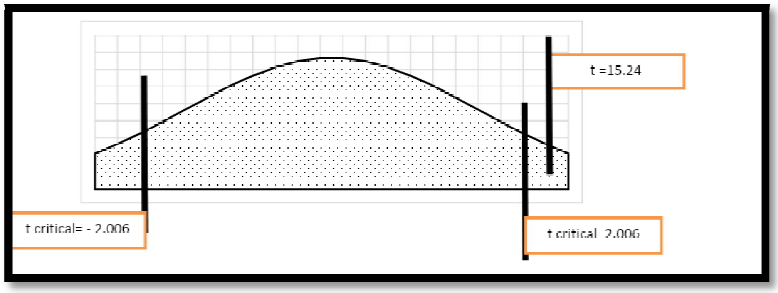

Figure 1: Two-Way Hypothesis Test for Employee Improvement

The analysis shows that we have enough evidence to reject the null hypothesis, and this denotes that the rating before the training and after is significantly different.

3.2.2. CASE 2

The third analysis is also trying to test if the rating of employees after the training is significantly different from the proposed competence rating (see results of the research in Table 10).

	Employee Average Competence Rating After Training	Proposed Target Competence Rating After Training
Mean	5.444444	9
Variance	1.044025	0
Observations	54	54
Pearson Correlation	#DIV/0!	
Hypothesized Mean Difference	0	
df	53	
t Stat	-25.5711	
P(T<=t) one-tail	8.68E-32	
t Critical one-tail	1.674116	
P(T<=t) two-tail	1.74E-31	
t Critical two-tail	2.005746	

Table 10: The Result of an Investigation from Comparing Scores after Training and the Projected Score

3.2.2.1 Interpretation

The test is a two-way test because we are checking if the mean is significantly different, that is if the employees got to the proposed competence rating of the consultant. The computed t is greater than the critical t-statistics for the two-way test (2.01). Figure 2 shows a graphical representation of the hypothesis tested.

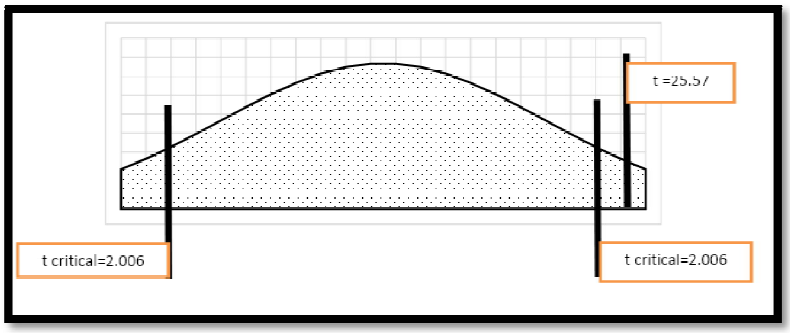

Figure 2: One-Way Hypothesis Test for Target Achieving

The analysis shows that we have enough evidence to reject the null hypothesis. It denotes that the competence rating after the training and that proposed by the consultants are significantly different.

3.2.3. CASE 3

The fourth analysis tries to verify the facilitator's claim of competence by comparing his claimed competence with competence ratings from the employees (see results of the study in Table 11).

	Facilitators Average Competence as Rated by the Participants	**Facilitators Claimed Competence**
Mean	84.16666667	85
Variance	49.76415094	0
Observations	54	54
Pearson Correlation	#DIV/0!	
Hypothesized Mean Difference	0	
df	53	
t Stat	-0.868075171	
P(T<=t) one-tail	0.194633464	
t Critical one-tail	1.674116237	
P(T<=t) two-tail	0.389266929	
t Critical two-tail	2.005745995	

Table 11: Results of Analysis from Comparing Facilitators' Competence Claim with Employees' Ratings

3.2.3.1. Interpretation

The test is a two-way test because we are checking if the means are significantly different; that is if the employee's rating of the facilitator's competence is different from his claimed rating. Figure 3 shows a graphical representation of the hypothesis tested.

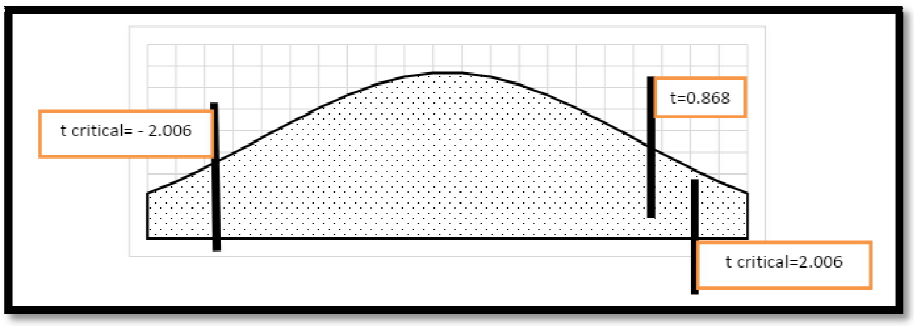

Figure 3: One-Way Hypothesis Test for Facilitators Claim

The analysis shows that we do not have enough evidence to reject the null hypothesis. The facilitator's claim of competence can be valid because it is not significantly different from the employee's rating who attended the training.

3.3. Benefit Cost Analysis

The amount valued for this training was NGN 90,000.00 ($250.00) per participant. We carried out a linear comparison to confirm if the organization achieves the full benefit for this training.

We proposed improving participants' competence from a rating of 4 to a proposed rating of 9 valued at 90,000.000. What the employees ended up achieving was an average rating of 5.5 after the training. Using the linear comparison as shown below, we can estimate the actual worth of the training;

NGN 90,000 = 9 rating

X = 5.5 rating

Actual value of training (X) = NGN 55,000.00

Amount of money the organization is losing on each participant= 90,000.00 – 55,000 = NGN 45,000.00

Total amount of money lost on 90 participants = 45,000 × 90 = NGN 4,050,000.00

4. Discussion

4.1. Overview

100% of the participants sampled in this training study voted that the duration of 4 days was not enough. Still, this response can be a plan to get away from work for more extended periods. With this, it was then necessary to test some hypothesis to support their claim. The hypotheses tested in this study is basically to evaluate if the 3-5 days duration for training is enough for effective organizational learning to align training to managerial competence needed to drive the vision. The results achieved from testing the hypothesis based on a significant difference in the employee competence baseline rating and what we recorded after the training shows they made some level of improvement in learning and understanding. Still, they did not get the target proposed from the strategic plan. The employee's competence rating baseline was 3.4 concerning the proposed target of 9, and they achieved an average of 5.4 competence rating, which was 60% of the proposed mark.

Although this result is enough to blame the cause of not achieving the proposed competence target on the training duration. Perhaps we could also think that the facilitator did not train them well. It has also made us compare the facilitators claimed competence rating with that of the participants to check for significant differences.

4.2. Testing Hypothesis

The first hypothesis test was that of the participant's improved competence from the baseline score rating. The participant's scores after the training were compared with the scores of their baseline to confirm a significant difference. The results showed a significant increase in competence score, but it was an average of 5.5, which was not what the consultants targeted for the training to achieve.

The second hypothesis was to check if there was a significant difference between what the participants achieved and what the facilitators proposed, and the result showed there was a significant difference, which means the training failed to achieve its desired aim. The last hypothesis tested was the claim of the facilitator's competence, which showed that the facilitator's claim was valid because there wasn't a significant difference between his rating and the rating given to him by the participants.

4.3. Eliminating Assumptions

We attributed the failure of participants to achieve the proposed competence score to three significant assumptions.

- The participants are dull, and such training is not for them.
- The facilitator(s) are not competent to train on that course.
- The duration is not enough

The assumption that participants are dull is invalid by the confirmed improved competence from an average of 3 to 5.5. If the participants were dull, they wouldn't have shown such a significant improvement in their competence rating. We would have considered this assumption valid if the score rating after the training was not significantly different from the score of their baseline rating.

The assumption that the facilitator is not competent, as the reason why participants could not achieve their target competence, was also not valid. It is because the participants rated the facilitator after the training. Their rating, when compared with his before the training, showed that the facilitator's claim of an 85% general competence was valid.

It leaves us with one obvious assumption, which we believe is right. If the participants had achieved that improvement in 4 days, then given more duration for more in-depth understanding through repetition, they were likely to achieve higher competence scores.

The scope of this study did not provide data for an extended testing period of training outside the 2-5 days duration, and we hope further studies will consider trying longer durations of 2,3 and 4 weeks to see the behavior of competence attained by participants.

4.4. Proposing a New Principle for Learning Methodology

After all data analysis, we believe the 2-5 days duration for training is not enough, and based on the facts presented, we, as a result of this, offer a new way of learning. The truth remains that more time is required for training to achieve its goals. It is because this is how the human brain functions. The human brain learns by repetition and association (Henshaw,2020), conditioning the neural paths to understand. The more we repeat an activity, the more the improvement.

During repetitive learning, three things occur to make understanding possible: instruction, introspect, and immersion (HBR, 2020). When we learn, we expect three possible outcomes: learning to acquire knowledge, learning to understand the background, and learning to use it to change our behaviors (Adelere,2017; How to learn, 2016). Learning to use the knowledge to change our behavior is what organizational training should look at aiming as these training help employees to be better at their tasks and drive the corporate vision.

People who do physical activities like athletes can easily relate to this because they always see physical improvements when they continuously do anything, be it running, chess, etc. It takes 10,000 hours of continuous practice to be a grandmaster of chess, and this is the constant practice that helps the brain condition its neural path to make you a master. If this is the way the brain works, then we need to develop a training method that incorporates learning a topic repetitively to condition the brain's neural path. This proposed method should fall in line with the reality that no organization is willing to let go of its staff for four weeks for training (as proposed by the participants). The HBR review magazine of January 2020 had this issue of training duration addressed by categorizing courses into those fit for physical training and those for digital format learning. This learning method shows that most training requires more time to learn, and only digital formats can provide such advantages with extended learning duration.

The training method we are proposing is that every training activity should have a minimum duration of 28 days (4 weeks). It will be in two sections, online digital learning format for 50% of the period where participants will learn the course using an online medium, which can be after working hours. After this, we can use a training venue outside the office space for person-to-person training. By this time, we believe the participants are already acquainted with the course and have interesting questions and contributions which enable understanding. After the person to person training, there should be a duration allocated for follow-ups to see how they are using the new skill they have acquired. We believe with this model; employees will learn better and use their skills to improve organizations.

5. Conclusion

We concluded the following from all the analysis;

- The 2-5 days duration for training in organizations is not enough, and assumptions supporting this fact was tested and verified to be non-practical in terms of understanding the knowledge.
- The average duration for training to achieve its intended aim should be four weeks, as confirmed by 85% of our study sample.
- Organizational Training methods should incorporate ways to repetitively teach the participants long enough for the neural path of their brain to be conditioned.
- To achieve real success, training methods in organizations should incorporate online or digital format of learning.

6. Acknowledgment

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