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Knowledge Transfer, Acquisition, and Improvement on Gender and Nutrition



A Case Study by IGNITE
July 2024

The Impacting Gender and Nutrition through Innovative Technical Exchange in Agriculture (IGNITE) project was a technical assistance programme, implemented by Tanager and its learning partners, in four African countries from 2018–2024. The project supported 35 African agricultural institutions across 18 countries to integrate gender and nutrition into their business operations and agricultural interventions.



Knowledge Transfer, Acquisition, and Improvement on Gender and Nutrition

Introduction

The Impacting Gender and Nutrition through Innovative Technical Exchange in Agriculture (IGNITE) project's core learning objectives were guided by the project's learning agenda. The first learning objective, focussed on organizational learning, was supposed to help IGNITE improve its technical assistance services and document lessons on how institutions mainstream gender and nutrition. Among the technical assistance services offered by IGNITE were training and sensitization. The training services assisted clients in improving their competence, capacity, and performance in gender mainstreaming and/or nutrition integration and developing the skills necessary to implement both processes within their institutions.

This case study documents the IGNITE model of knowledge acquisition and transfer, and improvement on gender and nutrition. To measure improvements in knowledge, training facilitators often administered pre- and post-training surveys to understand

- (1) the level of existing knowledge in the participant group before training, and
- (2) the level of improvement in knowledge and/or skills after the training.

The evaluation of the effectiveness of training took two forms: evaluation of learning and of learning transfer¹. Evaluation of learning refers to how well a training met its learning objectives and helped identify topics that were easy or challenging for

¹ Center for Disease Control and Development (2023, April 23). Training Effectiveness. Training Development. Retrieved July 4, 2023, from <https://www.cdc.gov/training/development/evaluate/training-effectiveness.html>

participants, which informed improvements or adjustments to future training. Evaluation of learning transfer measured how well a training participant could apply knowledge and skills learned to their workplace post-training.

Rationale

While IGNITE trainings were diverse in subject matter, skill development, and audience, there are lessons to be learnt about their effectiveness across topics and audiences. These lessons can help inform the development of future training and provide recommendations for future training facilitators. To understand overall training efficacy and start documenting these lessons, however, a larger analysis of IGNITE training — outside of individual assessments — was still needed. This case study is based on a meta-analysis of training assessments (pre- and post-surveys) conducted by IGNITE, to identify potential trends in:

- Knowledge improvements across all applicable trainings
- Knowledge improvements by the training topic (gender; nutrition; monitoring, evaluation and learning, (MEL); and social and behaviour change, (SBC)
- Qualitative feedback on desired future trainings and/or training improvements from participants

Using this analysis, the case study sought to establish which IGNITE activities or a sequenced mix of activities were most effective at encouraging clients to adopt and comply with gender and nutrition sensitive agricultural policies and approaches at the institutional level. The case study further explores the underlying parameters that affected gender and nutrition mainstreaming and identifies the kinds of technical assistance that were best suited to different institutional environments. The study also sought to provide concrete recommendations for other projects conducting gender and nutrition training for agriculture institutions.

This case study is part of a wider collection of best practices on providing technical assistance and capacity building in gender and nutrition, which may be of use to IGNITE client institutions, local service providers (LSPs), and other practitioners.

Methodology

Tanager reviewed a list of trainings conducted across three years of the project (Year 3, 4, and 5) using a training tracker, which captured details such as title of the training, clients trained, and number of participants reached by the training. Tanager also reviewed available training reports and training survey data files, to ascertain if the trainings contributed to knowledge transfer and acquisition.

To quantify the change in knowledge on gender and nutrition, the study purposely selected IGNITE trainings that used a pre- and post-training evaluation approach. According to the Kirkpatrick training evaluation model², a simple multiple-choice test is issued to participants before and after the training to measure the depth of learning in a training. The pre- and post-training test scores are then used to obtain declarative knowledge of the training participants, an intuitive and convenient way of operationalising training outcomes.

Further, considerations were made to IGNITE trainings that used a knowledge tree evaluation technique to measure change in knowledge. The knowledge tree approach uses a similar approach as the pre-/post-training evaluation approach: A tree diagram is displayed on a wall in the training room, and training participants are asked to mark their level of knowledge on a specific topic before the training starts. After the training, the participants are asked to use a different colour pen, to again mark their level of knowledge on the same topic. A training facilitator can therefore see the changes reflected in the knowledge tree. This type of evaluation provides qualitative status about satisfaction and learning success of a training.

This case study is based on data and information gathered from IGNITE's training conducted across three years (Year 3, 4, and 5) and which used a pre- and post-training evaluation approach. IGNITE's MEL Department reviewed a list of trainings using a training tracker, which captured details including the title of the training, clients trained, and number of training participants. The team also reviewed all the available training reports and training survey data files. The case study also reviewed reports from workshops that used a knowledge tree³ evaluation technique to measure change in knowledge. This type of evaluation provides qualitative status about satisfaction and learning success of a training. The

² Kirkpatrick, J. and W.K. Kirkpatrick. 2021. "Introduction to the New World Kirkpatrick Model." Accessed August 24, 2022. <https://www.kirkpatrickpartners.com/wp-content/uploads/2021/11/Introduction-to-the-Kirkpatrick-New-World-Model.pdf>

³ In the knowledge tree approach, a tree diagram is displayed on a wall in the training room and the training participants are asked to mark their level of knowledge on specific topic before the training starts. After the training, the participants are again asked to use a different colour pen, to mark their level of knowledge on the same topic.

study also picked qualitative feedback obtained from training participants regarding mode of training delivery, content, and topics of the training to validate the changes in knowledge.

Results and Discussion

Over the three years covered in the study, IGNITE delivered 51 training courses to partner institutions, representing 350 female participants (46.3%) and 406 male participants (53.7%). The lower representation of women can be attributed to the low representation of women in agricultural institutions⁴. Most of the courses covered topics on mainstreaming gender or nutrition in agricultural programmes, or a combination of these two topics. Other topics included gender and nutrition integration in MEL, SBC, and advocacy. Of the 51 trainings conducted, only 18 (35.3%) included an evaluation of learning component, where facilitators applied one of two different approaches to evaluate the effectiveness of the training on change in knowledge. Three of these courses used the knowledge tree approach, while 15 courses conducted pre-and post-training tests.

Trends of knowledge improvement over time

To measure the trends in knowledge improvement in gender and nutrition, the study compared the average changes in knowledge across the three project years. As presented in **Figure 1**, there was a rapid increase in average knowledge improvement on gender and/or nutrition from Year 3 to Year 4. This result implies the quality of IGNITE training delivery improved over time.

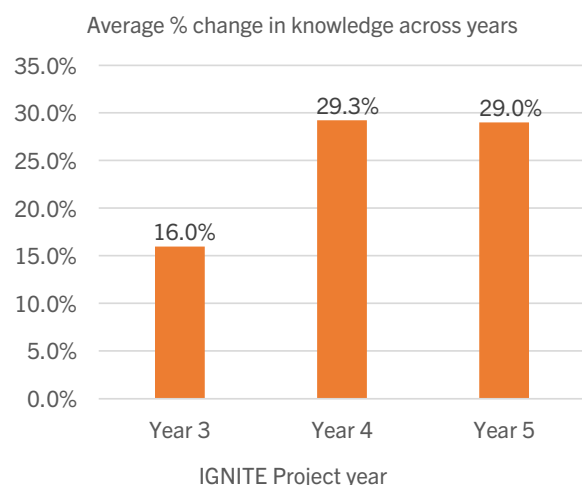


Figure 1: average % change in knowledge by IGNITE Year

IGNITE client's performance on change in gender and nutrition knowledge

The majority of IGNITE clients participated in at least one training course that used a pre- and post-evaluation approach to measure knowledge change. Some of the trainings with pre- and post-tests were left out of the analysis for the following reasons:

- (1) very low response rates for the pre-training test, making it impossible to make a comparison with the post-training test scores; and
- (2) technological challenges in administering the pre-/post-training test which led to poor response from participants.

Figure 2 compares the average percentage change in knowledge by client after training. All clients had a positive percentage change in gender and/or nutrition knowledge, with most clients' staff indicating more than 15% improvement in knowledge.

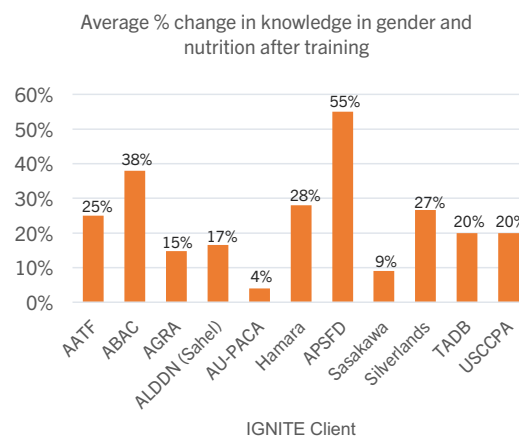


Figure 2. IGNITE client's performance on change in gender and nutrition knowledge.

Figure 2. IGNITE client's performance on change in gender and nutrition knowledge.

IGNITE trainings by topic

IGNITE clients participated in gender and nutrition mainstreaming and integration training, in addition to the specialised technical assistance that they received in developing different tools and policies. IGNITE's Nutrition and Gender 101 courses are suitable for sensitising staff of client institutions, including management, technical staff, and other supporting staff, on the importance of gender and nutrition integration and mainstreaming within agriculture. Client institutions could also request gender and/or nutrition training tailored to their specific need and unique audience.

The 15 IGNITE training courses that had pre-/ post-training evaluation were either on gender (6), nutrition (1), or a combination of gender and

⁴ Kaaria, S., Osorio, M., Wagner, S., & Gallina, A. (2016). Rural women's participation in producer organizations: An analysis of the barriers that women face and strategies to foster equitable and effective participation. *Journal of Gender, Agriculture and Food Security (Agri-Gender)*, 1(302-2016-4754), 148-167.

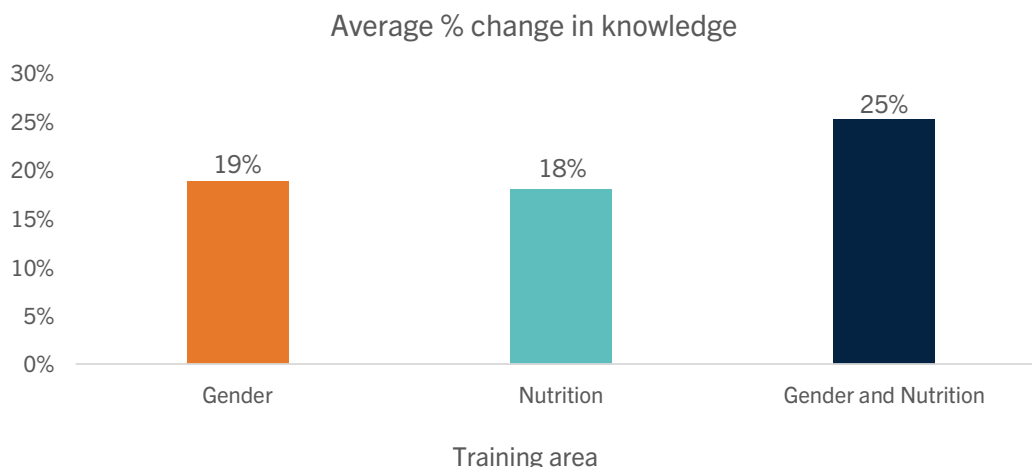


Figure 3. Average % change in Gender and nutrition knowledge on training area.

(8). **Figure 3** compares the average percentage change in knowledge per the scope of training. The results show that IGNITE courses that combine both gender and nutrition appear to be most effective in increasing the knowledge of clients. Courses on gender and nutrition had an average percentage change in knowledge of 19% and 18%, respectively, while courses that offered both gender and nutrition improved the knowledge of participants by 25%.

One participant from a combined gender and nutrition training said, ‘Training helped me to better understand about the interaction between nutrition, food systems, gender and agriculture as a whole’.

IGNITE trainings by delivery method

Most institutions were readjusting their activities in response to the COVID-19 pandemic in the period that IGNITE facilitated training on gender and nutrition integration. As a result, many of the initial trainings were held online/virtually, later shifting to in person as the crisis receded. In-person trainings allowed IGNITE client staff to interact with the instructors in a synchronous format, while the virtual training alternated between online presentations by instructors, group chats on the Zoom platform, and

questions and answer and brief groupwork sessions on Jamboard.

Of the 15 IGNITE training courses that had pre-post training evaluation eight were delivered in-person, while seven were delivered virtually. **Figure 4** compares the average percentage change in knowledge by mode of training delivery. In-person training was more effective in improving knowledge, with an average increase of 28.9 %, compared to 14.3% in virtual training. Staff participating in in-person training reported that ‘training was very interactive and encouraged sharing of ideas’. In-person training also enabled course learners to interact with the instructors closely and obtain clarifications easily and fast.

Participants reported some challenges with virtual training courses, including missed training materials for prior review, which affected their understanding of concepts during the training. Participants also felt that they missed practical discussions prior to the training and needed more time to prepare for presentation as well as to provide feedback.

Length of IGNITE trainings

The case study also compares the duration of IGNITE training courses and its effects on knowledge change in gender and nutrition. The 15 selected trainings took between one and seven days each. **Figure 5** shows the average percentage change in knowledge by course duration. The results show that the courses with longer duration had greater impact on knowledge improvement than shorter courses. The courses that lasted five days had the most impact, leading to a 41% change in knowledge, compared to only 13% increase for three-day courses. Feedback collected from participants in shorter trainings (three days or less) suggests that the time allocated may be too short to absorb all of the information presented. As one participant explained: ‘Concepts explained clearly although the training would have gained more if more time was allocated’.

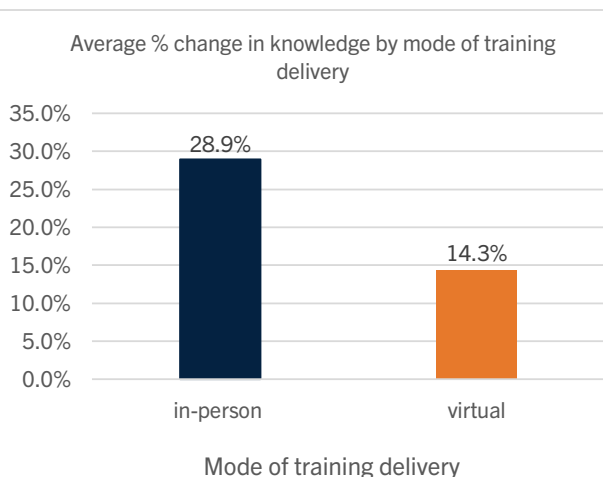


Figure 4 Average % change in knowledge by mode of training delivery

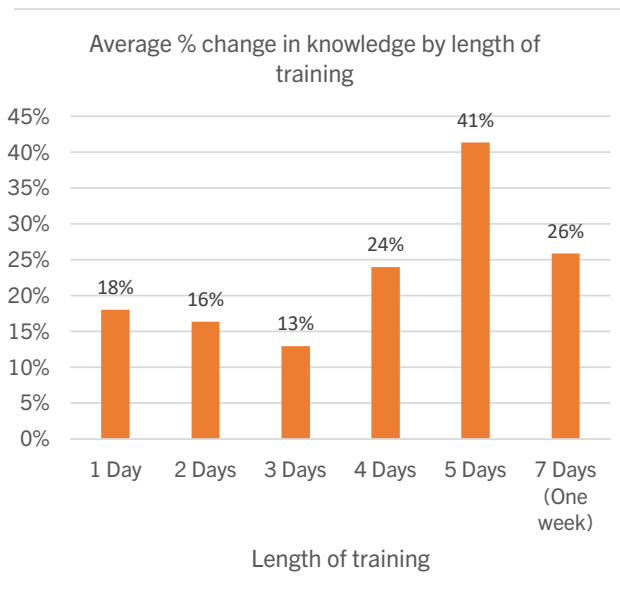


Figure 5: Average % change in knowledge by length of training

IGNITE technical experts also noted: ‘The time allocated for the training was the least appreciated [factor], the participants suggested that number of days should be increased’.⁵

Measuring knowledge improvement using knowledge tree

To use the knowledge tree to evaluate knowledge gain, facilitators drew a tree on a flip chart that had different levels of knowledge on the topics to be covered. The levels included ‘low’ or no knowledge at the roots of the tree, ‘medium’ knowledge at the stem of the tree, and ‘highly’ knowledgeable on the topic at the leaves/fruits of the tree. Training participants were asked to tick their level of knowledge on a topic before the training started. After the training, participants used a different colour pen to mark their level of knowledge on the same topics. The facilitator and participants then

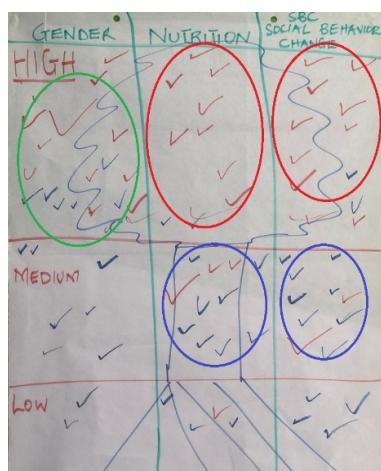


Figure 6: Knowledge tree as used in a gender, nutrition, and SBC training.

discussed the changes reflected in the knowledge tree and agreed on next steps.

In the example on Figure 6, the blue ticks on the tree show knowledge before training while the red ticks show knowledge after training. Overall, the blue ticks (before training) were more concentrated in the low and medium knowledge areas while the red ticks (after training) were more concentrated in the high knowledge section, indicating that many participants considered themselves as having increased knowledge following the training.

Lessons and Recommendations

Based on the results from this study, IGNITE identified the following lessons that other technical assistance providers and institutions can adopt in training and building capacity on gender or nutrition within the agriculture sector.

1. Prioritise developing a plan to assess learning prior to training delivery.

The findings in this case study highlight the importance of creating a clear plan for monitoring and evaluating training effectiveness prior to administering training. By planning for and collecting consistent evaluation data, IGNITE was able to measure effectiveness, identify best practices in training facilitation, and gather information on common knowledge gaps and challenges amongst participants, and adjust training material or delivery as needed.

The low number of IGNITE training events that recorded and submitted any type of pre- and post-training assessment (18 out of 51) was perhaps due to delayed completion of the project’s learning agenda. IGNITE was designed to be a ‘project in motion’, meaning that the project continuously generated learning and adapted it to the built-in feedback already prescribed in the learning agenda.

Client-focused training was already in progress by the time the learning agenda was fully implemented. This may have led to the preparation and delivery of trainings which was treated separately from the training assessments. As a result, technical experts conducted training assessments without any guidance or a standardized process.

IGNITE recommends that agencies and technical assistance projects institutionalise the pre-/post-training assessment process and ensure collection of regular and consistent data that accurately represents training impact. Identifying a theoretical

⁵ Extracted from a Foods Gender and Nutrition training report.

framework for training evaluation through the M&E process can also help to create a plan that measures impact at multiple levels, including participant satisfaction, learning and behaviour changes, and the return on investment for the training⁶.

Key questions for trainers to consider:

- How and when should pre- and post-training tests be administered? How can any other measurement tools like the training needs assessments be paired with pre/post evaluation tests to measure, after the training, how participants acquire and apply the knowledge and skills gained in training?
- Does the training plan measure change in knowledge as well as attitudes, skills, and behaviours?
- Should more than one evaluation method be included as part of the training to capture both quantitative and qualitative data? At what levels of impact is it important for the training program to measure change?

2. Trainers should find the right balance between creating standardised and audience-specific trainings.

One of IGNITE's unique strengths was the ability to meet with institutions in their areas of operation and to understand their experiences in gender and nutrition mainstreaming. This made it possible to tailor technical assistance to the client's individual gaps and needs. Based on data from the annual feedback surveys, partner institutions credit high levels of satisfaction on IGNITE engagement to this level of relationship building and the individual attention provided by the technical experts.

However, potential tradeoffs may need to be made in programme efficiency and determining larger-scale impact. For instance, when training is highly tailored to a specific institution and unique audience, trainers run the risk of 'reinventing the wheel' by trying to address every need at each institution, reducing the time available for the technical experts to engage in other activities. This double work can also lead to training assessments that are tightly aligned to each individual engagement at the expense of achieving the overall learning expectations. Such evaluations are then no longer comparable across different training sessions and the ability to assess larger impacts and trends is reduced.

IGNITE recommends working from a standard set of trainings modules that are focused on the core areas of expertise (gender, nutrition, social and behaviour change) and accompanied by standardized assessment questions and delivery. This would mean that all participants receive the same essential concepts — depending on the training topic — and are evaluated on the same information. If more tailored or unique information is necessary, additional modules can be added, adapted, and assessed depending on client needs, but would not interfere with the essential information and assessment questions provided.

Key questions for trainers to consider:

- Are there multiple audiences that could benefit from creating more tailored training, or is the training only applicable to one context?
- What are common topics requested by partner institutions based on their training needs that could be developed into add-on modules?

3. Institutions can capitalise on the format and length of a single training to maximise learning while also keeping in mind the resources available.

Results from this study suggest that trainings that are (1) longer in time (4–7 days) and (2) in person may produce better learning outcomes for participants. While a more rigorous study is needed to confirm these results, it is still useful to consider how trainings can be modified to account for these findings.

When resources (including personnel, time, budget, space) are available, it might be an advantage to hold in-person trainings over multiple days to increase knowledge improvement for participants. When resources are limited, however, blended learning that includes both in-person and virtual elements has been shown to be an effective way of delivering trainings⁷. In these cases, it might make more sense to plan for a training that has shorter, in-person components complemented by online sessions to ensure that there is enough time to cover the necessary topics of the training.

Finally, in circumstances where fully virtual training is necessary or the only option, it is important to focus on how the training can incorporate more interactive elements and sharing of ideas and discussions between participants to enhance the

⁶ For example, the USAID Advancing nutrition brief provides a practical framework for evaluating nutrition training programs. USAID Advancing Nutrition. 2021. "Effectively Measuring Training: Building Knowledge and Skills for Nutrition Programs." Accessed September 21, 2023. Effectively Measuring Training: Building Knowledge and Skills for Nutrition Programs (September 2023) (advancingnutrition.org)

⁷ Shrimpton, Roger, et al. "Nutrition Capacity Development: A Practice Framework." *Public Health Nutrition*, vol. 17, no. 3, 7 May 2013, pp. 682–688

learning process. It's also important to make sure that the material being presented for the online training is easily accessible to participants both before (as applicable) and during training sessions.

Key questions for institutions to consider:

- Is it possible to offer different options for hybrid, in-person, and virtual training courses?
- How does the training schedule align with the organisational priorities for the calendar years for staff availability while also avoiding conflict with work schedules?
- Are the training objectives and timeline clearly communicated to participants and stakeholders to manage expectations?
- Are there interactive tools to use before the training to encourage sharing of ideas and discussions between participants?

4. Consider providing an integrated training to maximise learning and to reinforce the synergies between gender and nutrition.

The findings suggest that trainings that combine both gender and nutrition components result in a higher level of learning, compared to those that do not. IGNITE training courses that combined both gender and nutrition were most effective in increasing the knowledge of clients as compared to offering either gender or nutrition trainings on their own. It is possible that integrating technical areas and highlighting the synergies between them may improve overall learning for participants, though further studies would be needed to confirm the

synergies. A longitudinal assessment of learning transfer, which demonstrates effectiveness of application of information learned in the workplace, would also be an important step in understanding whether or not the increased learning in integrated trainings translates to tangible changes within client institutions.

Key questions to consider:

- What kind of work does the partner institution do that might naturally incorporate both gender and nutrition technical areas?
- How can we create demand for training on either gender or nutrition for clients that might have requested one of the two areas for support?
- Are there resources to assess both learning and learning transfer to determine the full impact of integrated gender and nutrition trainings?

Conclusion

This case study has demonstrated the value of integrating learning assessments in training programmes aimed at building the capacity of institutional teams in gender and nutrition integration. Training facilitators should incorporate various assessment methods to assess whether the training was effective in transferring knowledge and skills. In addition, facilitators should keep in mind that different training approaches impact learning differently. Depending on the resources available, trainers may have to choose a mix of training methods to increase participants' learning.



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IGNITE Partners

Tanager, an ACDI/VOCA affiliate, is a global development organization that empowers people to realize life-changing economic and social opportunities. We have 30 years of experience implementing gender-transformative and nutrition-sensitive agriculture approaches, connecting actors across the production supply chain, fostering knowledge and access for women and other marginalized groups, and unlocking sustainable, climate-smart economic opportunities for all.

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