

**Promoting Innovation and Team Performance Through Cognitive Diversity: A case of
Extension Agents in Morogoro-Tanzania**

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Introduction

Agriculture is a significant driver of growth, poverty reduction and food security, not to mention an important source of raw materials in Tanzania. Extension agents as change agents deliberately try to bring about change or innovation in their communities to solve various agricultural problems. According to Arif Shah et al, (2013), the extension agents remain one of the prime movers in the development of the agriculture sector. When working in communities, extension agents collaborate and engage with other stakeholders to solve various agricultural problems in order to increase food security and improve the community livelihoods. However, according to Jablow (2005), “Different types of problems require different types of solution and different approaches and resources and needs to reach those solutions”. Thus extension agents have to be able to apply different solutions depending on the nature of the problem to be solved.

Theoretical Framework

This study utilized (KAI) Kirton Adaption- Innovation Theory (2011). According to Kirton’s proposed continuum of cognitive style, the range between more adaptive and more innovative individual positions represent an individual approach to problem-solving, creativity and decision making. Adaptors prefer to work in the guidelines as a structure; while innovators prefer to work within the structure they create. “The key to the adaptive-innovative distinction is the way people prefer to manage cognitive structure. The more adaptive prefer their problems to be associated with more structure, with more of this structure consensually agreed; the more innovative prefer solving problems with looser structure and are less concerned that the structure they use is consensually agreed” KAI (2011) (pg.47). It is, however, apparent that our cognitive ability is what dictates our problem-solving style. Understanding such styles is critical in the world of today than ever before as they surely help in maintaining healthy relationships in every corner of our lives and thus make us stay productive. This is because we live and operate in the world that is full of complexities. Awareness of individual style brings about substantial performance improvement. According to Stum (2009) “people differ in their approach to problem-solving, Some are more comfortable as change agents in certain scenarios depending on what they deem as acceptable change”. The economic environment is uncertain, the climatic conditions become adverse, cultural aspects contribute in performance, team dynamics carries significant attention while leaders are still deploying management techniques of a manual worker age, just to mention a few. All individuals are creative and problem solvers and each person is a change agent, but they differ in their styles of solving problems (Kirton, 2011).

Methodology

A three day workshop explaining KAI theory was followed by a qualitative research study. Both workshop and research were conducted in the Morogoro Region. Seventeen Extension agents (n=17) were selected from Morogoro Region for this study. The sample was selected to achieve multiple perspectives on preferred style in problem-solving and creativity, management of cognitive gap and cognitive diversity when working in teams, as well as understanding the new concept of KAI. Data were collected through face-to-face interviews, which were audio recorded and transcribed verbatim. KAI inventory was used to measure

participants' styles in problem solving. The study was conducted in Kiswahili and was translated by the researcher into English for data analysis. The consent form was verbally explained in Kiswahili. The interviews were transcribed and open-coded to generate themes, which was supported by quotations.

Results

Working in groups require individual and group effort to accomplish the stated goal. Cognitive diversity is important in solving problems especially when working in teams. Understanding individual differences reduces team conflicts and increases team performance and cohesion. The study shows that many extension agents face challenges when dealing with teams in communities or the working places. The group interviewed showed the characteristics of more adaptive individuals, however, some individuals seem to prefer working within less structure but the working environment had a major impact on their current style. Many showed that they adopted coping behavior when working with teams but also in their family and working places. They get used to the situation for the sake of reducing conflicts despite the fact that it is not their preference. Participants appreciated the impact of KAI in understanding their preferred style when solving a problems. KAI can be one of the important instruments that can be expedient in different institutions to reduce conflict, increase performance, collaboration and cohesion.

Conclusion

People behave differently in their unique ways when exposed to a given situation. One's personality includes, but not limited to, attitudes, modes of thought, feelings and actions, self-awareness, self-regulation, self-consciousness responses to opportunity and stress and interaction to others. Cognitive diversity is inevitable when working in teams, subsequently, there is a need for extension agents in Tanzania to learn more about their differences in styles when solving problems. Teams need to push each other in critical and creative thinking which includes accepting and acknowledging vulnerability, asking challenging questions and taking personal and group risks. Understanding self and others may increase effectiveness, efficiency, and collaboration among extension agents and other actors.

Implications and Recommendations

More Adaptive and more innovative individuals view their paradigms and core concepts differently (Jablokow, 2005). Understanding the difference in problem solving style is very important in our day to day lives. In group tasks, it is essential to bring both more adaptive and more innovative individuals to the table and work together to accomplish the stated goal. According to KAI (2011) the individual cognitive style is innate, it does not change. Technique can be learned to improve the skills in problem solving but the style is the same. Team differences in problem-solving style are useful in managing teams, promoting team interactions and putting emphasis on team collective problem-solving. The knowledge of KAI is critical in creating self-awareness that would make workplaces great places to be. From the analysis and conclusion, cognitive diversity influences innovative ideas, creativity, promote cohesion and collaboration and increases interaction between team members.

Without understanding the differences in cognitive styles, often times people adopt a coping behavior. Some of the participants shared their experiences on the act of coping in

working places or in their families. A coping behavior can be consciously or unconsciously applied depending on the situation, and sometimes there is a purpose in coping. In some cases coping is advantageous but if it is prolonged it can create problems. Most people learn skills and techniques when coping so as to improve performance and to stay away from the problems, however people use too much energy when coping.

References

- Arif Shah, J., Asmuni, A., & Ismail, A. (2013). Roles of Extension Agents towards Agricultural Practice in Malaysia. *International journal of Advanced science Engineering Information Technology*, 3 (1)
- Jablokow, K.W. (2005). The catalytic nature of science: Implications for scientific problem solving in the 21st century. *Technology in Society* 27, 531–549.
doi:10.1016/j.techsoc.2005.08.006
- Kirton, J. M (2011) Adaption- Innovation. In the context of diversity and change. Routledge. Network
- Shapcott, M.K., Carron, V.A., Burke, M.S., Bradshaw, H.M., & Estabrooks, A.P. (2006). Member Diversity and Cohesion and Performance in walking groups. *Small Group Research*. *Sage Publication*, 37(6), 701-720
- Stum, J. (2009). Kirton's Adaption-Innovation Theory: Managing Cognitive Styles in Times of Diversity and Change. *Emerging Leadership Journeys*, 2 (1), pp. 66-78.
- Webber, S.S., & Donahue, L.M. (2001). Impact of highly and less-job- related diversity on work group cohesion and performance: A meta-analysis. *Journal of Management*, 27, 141-162.