Teaching Aptitude and Personality Type of Faculty Members of Agricultural Universities

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The present study investigated the relationship between teaching aptitude and personality type of faculty members of Agricultural Universities. Data were collected from 500 respondents of different Agricultural Universities in India by administering Teaching Aptitude Test (TAT) and Myers-Briggs Type Indicator (MBTI) Form-M. Results indicated that 277 faculty members (55.4%) had "Above Average" teaching aptitude while 144 (28.8%) had "Average" to "Low" level of teaching aptitude. Among the dimensions of teaching aptitude, faculty members scored low in "Interest towards students" and "Teaching potential". The dominant personality type preferences of faculty members were found to be extroversion (65.6%), sensing (67.2%), thinking (54.6%) and judging (86.6%). ESTJ was the dominant personality type (23.2%) followed by ESFJ (16.6%), ENTJ (11%), ISFJ (10 2%) and ISTJ (9.4%). Teaching aptitude score was negatively correlated with sensing and feeling types of personality. Extroversion had positive correlation with social contacts and teaching innovations whereas, judging type was negatively correlated with Interest towards students. The implications of these findings were discussed with reference to quality teaching and suggestions were made to highlight the need based capacity building programmes for the faculty of Agricultural Universities..

Keywords: Teaching Aptitude, Personality type, Faculty Members.

Higher agricultural education is the backbone of the national agricultural education, research and extension systems. A strong network of agricultural educational institutions is the foundation for producing quality human resource and relevant research for a range of stakeholders in the food chain (Rama Rao et al., 2007). Indian higher agricultural education system embraces at present 60-State Agricultural Universities (SAU's), 2-Central Agricultural Universities (CAU), 5- Deemed-to-be Universities (DUs), 4-Central Universities (CUs) with agriculture faculty, and one Open Agricultural University (OAU). These institutions annually admit about 40,000 students at all levels in agriculture and allied sciences in the country (ICAR, 2012). While significant contributions were made by the Agricultural Universities for human resource development in the agricultural arena, the present Indian higher agricultural education sector is facing many challenges which include: Inadequate and substandard quality of human resources in agricultural universities, lack of central regulatory authority for quality assurance of agricultural education, weaknesses in teaching-learning process, funding crunch and lack of systematic faculty development initiatives (Ashish, 2013; Tamboli & Nene, 2013).

Manpower is one of the main issues for colleges in agricultural universities and it is also an issue of quality assessment. (Challa et al., 2007). The quality of any educational programme is largely determined by the competence and performance of its teachers. Stephenson (2001) stated that one of the characteristics of extraordinary teachers is

that they have passion for their field. Yair (2008) also noticed that memories of extraordinary professors often described how these teachers were passionate about their subject matter. The definition of quality teaching is related to each teacher's values, aptitudes and attitudes. Teaching is a dynamic activity, which has strong subjective aspects which depend on personal and collective philosophy, and values (IMHE, 2009). Although an educational system has excellent resources, if the teachers are lacking teaching aptitude and are incompetent or indifferent to their responsibilities, the whole programme is likely to be ineffective and largely wasteful. Several studies have provided substantial evidence favouring teacher aptitude, for teaching effectiveness and quality education (Beena, 1995; Kanti, 2013; Kaur et al, 2014). Complexity and multi dimensional nature of teacher aptitude warrants a comprehensive study of factors related to it.

Individual personalities and temperaments of teaching faculty may also impact the quality of education students receive. Research on effective teaching and personality characteristics that support quality teaching has been integral part of the academic milieu (Rushton et al., 2007). Research findings support a strong relationship between a teacher's personality and the learning environment he or she creates (Barrett, 1991; Kent & Fisher, 1997). Myers-Briggs Type Indicator (MBTI), a self-report inventory based on Jungian psychological principles helps individuals identify their learning preferences, teaching styles and personality characteristics (Mamchur, 1996). The MBTI measures four bi-polar dimensions of personality and is often "the frequent choice of researchers in education as it is particularly suited to applications in teaching and learning" (Kent & Fisher, 1997; Tyagi, 2008). Personality traits and aptitude are important components in the selection, placement and training of teaching faculty for improving the quality in education. Keeping in view of above facts, the present study was undertaken with the following objectives:

1. To ascertain the levels and dimensions of teaching aptitude of faculty members of Agricultural Universities.

2. To assess personality type of faculty members of Agricultural Universities.

3. To realize the relationship between teaching aptitude and personality type of faculty members of Agricultural Universities.

Method

Sample:

The present study was conducted on faculty members of Agricultural Universities who participated in various capacity building training programs organized by the National Academy of Agricultural Research Management (NAARM), Hyderabad, India during 2012-14. A total of 500 faculty members from different States of India have participated in this study. They were in the cadres of Assistant Professor (n= 368), Associate Professor (n= 80) and Professor (n= 52). Among the participants 28 % were females (n= 141) and 72 % were males (n= 359). The age of participants ranged from 25 to 57 years with an average of 39.5 years and standard deviation of 5.2.

Tools:

Teaching Aptitude Test (TAT) (Ghakar & Rajnish, 2010): This test was used to measure the level of aptitude of the faculty for teaching and comprised of 35 statements divided into six categories viz. i. Teaching profession, ii. Interest towards students, iii. Social contacts, iv. Innovations in teaching, v. Professional ethics, and vi. Teaching potential. Four alternative answers were given for each statement with only one correct answer, which could be found out with the help of scoring key. Each correct answer carried one mark. The maximum achievable score could be 35 and minimum zero. This score formed the Raw Score for the test. For conversion of Raw Score into Standard Score, Z-Score Norms given were used. To find out the status of teaching aptitude, Interpretation Norms were also given by the authors.

Myers-Briggs Type Indicator (MBTI), Form M (Myers & Briggs, 1998): MBTI, Form-M is a self-scorable instrument with 93 items and contains four scales - extraversion-introversion (E-I), sensing-intuition (S-N), thinking-feeling (T-F), and judging-perceiving (J-P). 21 questions required the test-taker to choose between E and I; 26 questions to choose between S and N; 24 questions to choose between T and F; and 22 questions to choose between J and P. Personality type is determined by the highest score for each scale. In the event of equal scores for a scale, Introversion, Intuition, Feeling and Perceiving is used.

Procedure:

The data were collected during the faculty development training programmes conducted by the Academy, either on-campus (Hyderabad) or off-campus (at the respective university campuses). The duration of these training programmes ranged from 7 to 21 days. Teaching Aptitude Test (TAT) and Personality Type Assessment forms were administered to the faculty (on 2 different days), after briefly explaining the purpose of these tests. Scoring keys and interpretation norms were provided to find out the level of teaching aptitude and personality dimensions of the faculty. The researcher personally administered the tools to the participants and collected the data. Tests were scored, tabulated and descriptive statistic indicators were calculated using MS Excel. Pearson's correlations were calculated between the variables.

Results

Teaching Aptitude of faculty: Teaching aptitude test (TAT) scores of the faculty members (n=500) varied from 16 to 33 (as minimum and maximum), with an average of 25.7 and standard deviation of 2.71. Out of the total, 277 faculty members (55.4 %) have above average teaching aptitude, 76 (15.2 %) have high teaching aptitude and 3 (0.6 %) have very high teaching aptitude. However, 121 (24.2 %), 20 (4 %) and 3 (0.6 %) faculty members have average, below average and low level of teaching aptitude respectively.

Among six dimensions of teaching aptitude measured, the mean score in dimension "interest towards students" was the lowest (2.8) amounting to 46.7% of the maximum possible score of 6. Similarly, the average score in dimension "teaching potential" was somewhat lower (5) compared to the maximum possible score of 7. However, the scores in other four dimensions of teaching aptitude were higher.

Personality Types of faculty are given in Table 1.

Using preferences on each of the four scales (Extroversion-Introversion, Sensing-Intuition, Thinking-Feeling, and Judging-perceiving) resulted in a possibility of 16 different personality types. The predominant personality type of faculty

Table 1. Myers-Briggs Type preferences of faculty of Agricultural Universities

Scale	Mean Score (M)	Standard Deviation (SD)	Number of faculty (f)	Percent (%)
Extraversion (E)	13.7	5.8	328	65.6
Introversion (I)	7.3	5.2	172	34.4
Sensing (S)	15.6	4.2	336	67.2
Intuition (N)	10.4	3.8	164	32.8
Thinking (T)	13.8	4.3	273	54.6
Feeling (F)	10.2	4.6	227	45.4
Judging (J)	17.3	4.9	433	86.6
Perceiving (P)	4.7	3.4	67	13.4

of Agricultural Universities was found to be ESTJ (n=116, 23.2%) followed by ESFJ (n=83, 16.6%), ENTJ (n=55, 11.0%), ISFJ (n=51, 10.2%) and ISTJ (n=47, 9.4%). Personality types, INTP (n=2, 0.4%), ENTP (n=3, 0.6%) and ESTP (n=7, 1.4%) were among the lowest of the occurrences (Table 2).

Relationship between teaching aptitude and Personality Types

Pearson's correlations were calculated to quantify relationships between personality type scale scores and teaching aptitude scores. Myers-Briggs Form-M produces direct, inverse relationships between extroversion and introversion; sensing and intuition; thinking and feeling; and judging and perceiving. Therefore, correlations for E, S, T and J were direct inverse of those reported for I, N, F and P.

Table 2. MBTI-Personality profiles of Faculty of Agricultural Universities

Type	Total Number	Percent
Extraversion-Sensing-Thinking-Judging	116	23.2
Extraversion-Sensing-Feeling-Judging	83	16.6
Extraversion-Intuition-Thinking-Judging	55	11.0
Introversion-Sensing-Feeling-Judging	51	10.2
Introversion-Sensing-Thinking-Judging	47	9.4
Extraversion-Intuition-Feeling-Judging	39	7.8
Introversion-Intuition-Thinking-Judging	33	6.6
Extraversion-Intuition-Feeling-Perceiving	14	2.8
Extraversion-Sensing-Feeling-Perceiving	11	2.2
Introversion-Sensing-Feeling-Perceiving	11	2.2
Introversion-Sensing-Thinking-Perceiving	10	2.0
Introversion-Intuition-Feeling-Judging	9	1.8
Introversion-Intuition-Feeling-Perceiving	9	1.8
Extraversion-Sensing-Thinking-Perceiving	7	1.4
Extraversion-Intuition-Thinking-Perceiving	3	0.6
Introversion-Intuition-Thinking-Perceiving	2	0.4
Total	500	

Table 3. Correlations between personality type and teaching aptitude scores

Dimension of Teaching Aptitude	Extroversion (E)	Introversion (I)	Sensing (S)	Intuition (N)	Thinking (T)	Feeling (F)	Judging (J)	Perceiving (P)
Teaching profession	-0.106*	+0.038	+0.061	-0.076	+0.011	-0.038	+0.059	-0.099*
Interest towards students	-0.032	+0.081	-0.060	+0.080	+0.080	-0.084	-0.105*	+0.138
Social contacts	+0.118**	-0.072	-0.004	+0.031	-0.018	+0.021	+0.025	-0.038
Innovations	+0.088*	-0.043	-0.058	+0.074	-0.004	+0.010	-0.015	+0.042
Professional ethics	+0.049	-0.017	-0.099*	+0.004	-0.037	+0.085	+0.084	-0.096*
Teaching potential	+0.007	-0.029	-0.105*	+0.006	+0.096*	-0.191**	+0.021	-0.080
Total score	+0.031	-0.008	-0.095*	+0.032	+0.075	-0.104*	+0.038	-0.054

$*p < 0.05$ $**p < 0.01$

Faculty member's total aptitude score was significantly correlated with sensing and feeling type of personality (Table 3). Among dimensions of teaching aptitude, teaching profession is negatively correlated with extroversion and perceiving. Interest towards students and judging type was negatively correlated and was significant. There was a strong positive correlation of extroversion with social contacts and innovations. Professional ethics was negatively correlated with sensing and perceiving. However, Teaching potential was negatively correlated with sensing and feeling types but was positively correlated with thinking type of personality.

Discussion

In the present study, a cumulative total of 28.8 % of faculty have "Average" to "Low" level of teaching aptitude, which reflects the quality of teaching in these educational institutes. Lower teaching aptitude score of faculty seems due to lesser scores in dimensions "interest towards students" and "teaching potential". This clearly indicates the importance of personality characteristics of teacher towards the teaching profession and its stakeholders i.e. students. These findings are in line with studies of Yair (2008) who concluded that "Excellent teachers are those who have symmetric and personalized relations with their pupils, thus helping students to decrease their uncertainty, suspicion and disengagement, and providing them with the courage to raise innovative ideas and quality teaching".

Table 2 shows that the predominant personality type preferences of faculty members were found to be extroversion, sensing, thinking and judging which resulted in the highest number of faculty belonging to ESTJ type of personality. The other predominant personality types found in the present study were ESFJ, ENTJ, ISFJ and ISTJ. A careful view of the type of preferences revealed that STJs were more predominant over NTJs. This is consistent with the findings of Kitchel and Cano (2001) with agricultural education majors and minors at the Ohio State University. Clancy (1997) reported that the STJ types have the most

difficulty in dealing with organizational change and are interpreted by others as "resistance". Because STJs comprise so great a part of the workforce in most organizations as it is evident from the present research work, and because much of the research implies that intuitive deal better with change, practitioners of the organizations need to understand that STJs will resist change if they are not informed and included.

As a predominant personality type, ESTJ types as teachers are perceived as well planned, follow structured routines with practical examples and seem inflexible. ESFJ personality type as teachers creates a warm, well disciplined classroom where courtesy is valued and can be yielded to established ideas and values. ENTJ types as teachers tend to use Socratic methods and encourage debate. They want insightful thinking, create firm control. ISFJ types as teachers are sensitive and good at breaking complex tasks to small manageable ones. ISTJ type as teachers offer calm, serious precise teaching style and empathize need for accuracy and details (Fairhurst & Fairhurst, 1995; Roberts et al., 2007).

In the present study, extroversion was positively correlated with social contacts and innovations of teaching. This relationship established the importance of being social and orientation towards the outer world of people, events or things for better functioning of a teacher. In a correlation study between MBTI and emotional intelligence, Higgs (2001) reported that extroversion was correlated with motivation, influence, and intuitive decision making. The negative relationship between teaching aptitude and sensing type in the present study showed the limitation of teachers being their focus on practical concrete problems, and general belief that if something works, it is best left alone. On the other side, individuals who have a tendency to understand the world through an intuitive process prefer to live in a world of possibilities and options, often looking toward the future (Hirsh & Kummerow, 1997).

Teaching potential was found to be positively correlated with thinking and negatively correlated

with feeling type of personality preference. This indicates the importance of thinking over the feeling type for effective teacher's personality. Thinking types prefer to focus on making decisions based on an impersonal objective position while feeling types, have a tendency to respond well and easily to people's values and are adept at assessing the human impact of decisions. Judging type had a negative relationship with the interest towards students whereas perceiving type had negatively correlated with teaching profession and professional ethics. Judging types prefer to live structured, organized life and tend to be self-disciplined, enjoy making decisions, and thrive on order. Perceiving types prefer to live a lifestyle that is more flexible and adaptable. They tend to thrive on spontaneity, prefer to leave things open, require more information in order to make decisions, and often get things done at the last minute (Sprague, 1997). Earlier studies also suggest that teacher personality can affect student learning outcomes via the psychological environment of the classroom (Tonelson, 1981). Hamza and Nash's (1996) study shows that teachers of particular character traits are better able to foster a learning environment that promotes creative thinking and problem solving skills.

Suggestions:

Findings of this study showed that relationship between teaching aptitude and personality types bear an important theoretical and practical implication, especially due to the fact that this was never examined before in case of faculty members of Agricultural Universities in India. For delivery of quality education, we need quality faculty members who are equipped with necessary knowledge, skills and competencies for effective functioning. Understanding the level of teaching aptitude and personality traits of faculty members is very essential for not only improving the quality teaching but also identifying the training needs of these faculty members.

References

Ashish, K.M. (2013). Agricultural Education in India: Challenges and Prospects. *Voice of Research, 2* (3), 90-94.

Barrett, L. (1991). Impact of teacher personality on classroom environment. *Journal of Psychological Type, 18*, 1-2.

Beena, S. (1995). *Determinants of Teacher Effectiveness.* Ambala Cantt: The India Publications.

Challa, J., Rama Rao, D. & Nanda, S.K. (2007). Assessment of Qualitative Rating of Colleges in State Agricultural Universities, ICAR-AP Cess Fund Project Report, *National Academy of Agricultural Research Management*, Hyderabad, India.

Clancy, S.G. (1997). STJs and change: Resistance, reaction or misunderstanding? In: C. Fitzgerald and L.K.Kirby (Eds.), *Developing leaders: Research and applications in psychological types and leadership development* (pp. 415-438), Palo Alto, CA: Davies-Black.

Fairhurst, A.M. & Fairhurst, L.L. (1995). *Effective teaching-effective learning: Making the personality connection in your classroom.* Palo Alto, CA: Davis-Black.

Gakhar, S.C. & Rajnish. (2010). *Manual for Teaching Aptitude Test.* National Psychological Corporation, Agra, India.

Hamza, K. & Nash, W. R. (1996). Creating and Fostering a Learning Environment That Promotes Creative Thinking and Problem Solving Skills. *Research Report.* ERIC Document ED 406435.

Higgs, M. (2001). Is there a relationship between the Myers-Briggs type indicator and emotional intelligence? *Journal of Managerial Psychology, 16* (7), 509-533.

Hirsh, S. & Kummerow, J. (1997). Life types: Understanding yourself and make the most of who you are. New York: Warner Books.

ICAR. (2012). *Policy on Higher Agricultural Education.* Education Division, Indian Council of Agricultural Research, New Delhi, India, 19 pp.

IMHE. (2009). *Learning Our Lesson: Review of Quality Teaching in Higher Education.* Institutional Management in Higher Education.www.oecd.org/edu/imhe/44058352.pdf.

Kanti, K.S. (2013). A study of the relationship between Teacher Attitude & Teaching Aptitude of prospective Secondary School Teachers. *International Journal of Education and Psychological Research, 2* (4), 95-98.

Kaur, K., Singh, G. & Sangha, S.S. (2014). Teaching Aptitude and Attitude towards Teaching as Predictors of Teaching Skills of Prospective Science Teachers. *Edubeam Multidisciplinary-Online Research Journal, 11* (1), 1-22.

Kent, H. & Fisher, D. (1997). *Associations between teacher personality and classroom environment.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL (Eric Document Reproduction Service No. ED 407395).

Kitchel, T & Cano, J. (2001). *The relationship between learning style and personality type of Students majoring and minoring agricultural education at the Ohio State University.* Proceedings of the 55th Central States Agricultural Education Research Conference. St. Louis, MO. 142-153.

Mamchur, C. (1996). *A teacher's guide to cognitive type theory and learning style.* Alexandria, VA: ASCD.

Myers, I.B., & Briggs, K.C. (1998). *Myers-Briggs Type Indicator,* Form M. Mountain View, California: CPP Inc.

Rama Rao, D., Muralidhar, U. & Kalla, J.C. (2007). Planning Agricultural Education in India. *European Journal of Agricultural Education and Extension, 4* (1), 67-80.

Roberts, T.G., Harlin, J.F. & Briers, G.E. (2007). The relationship between teaching efficacy and personality type of cooperating teachers. *Journal of Agricultural Education, 48* (4), 55-66.

Rushton, S., Morgan, J. & Richard, M. (2007). Teacher's Myers-Briggs personality profiles: Identifying effective teacher personality traits. *Teaching and Teacher Education, 23,* 432-441.

Sprague, M.M. (1997). Personality type matching and student teacher evaluation. *Contemporary Education, 69,* 54-57.

Stephenson, F. (2001). *Extraordinary Teachers: The Essence of Excellent Teaching,* Andrews McMeel Publishing, Kansas City.

Tamboli, P.M. & Nene, Y.L. (2013). Modernizing Higher Agricultural Education System in India to Meet the Challenges of 21st Century. *Asian Agri-History, 17* (3), 251-264.

Tonelson, S. W. (1981). The Importance of Teacher Self-Concept to Create a Healthy Psychological Environment for Learning. *Education, 102,* 96-100.

Tyagi, A. (2008). Personality profiles identification using MBTI test for management students: An empirical study. *Journal of the Indian Academy of Applied Psychology, 34* (1), 151-162.

Yair, G. (2008). Can We Administer the Scholarship of Teaching? Lessons from Outstanding Professors in Higher Education, *Higher Education, 55* (4), 447-459.

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