The Importance of Individual Differences in Students and Teachers and their Interaction with Culture: Jung's Personality Types

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After introducing Carl Gustav Jung's theory of Psychological Types, the roots of which partly go back to ancient Indian philosophy and its operationalization by the Myers-Briggs Type Indicator (MBTI), the literature on their application in the fields of schooling and education is reviewed. Some agreement about personality types of gifted students was found, but there was little agreement with respect to more representative student samples or to teachers' personality. With regard to the interaction of students' and teachers' personality, some studies are in favour of matching students and teachers, whereas others recommend learning from opposite types.

Keywords: Psychological Types, MBTI, India, Educational Psychology, Culture.

Carl Jung's personality types: Their reference to Indian philosophy

"Life is sustained only by individuals, it does not exist per se; there is no life of millions, that's nonsense. Rather, millions of individuals are the bearers of life1" is a translated quotation of Carl Jung from an interview conducted with him in 1960.

This focus on each individual's uniqueness is characteristic of Jung's (1960/1921) theory of Psychological Types, which he developed by starting from ancient Greek philosophy and early Christianity, the gnosis and its most famous opponents, Tertullian (the "introvert") and Origines (the "extrovert"). Further steps in his line of arguments were Christianity of the Middle Ages as well as newer European philosophy and literature, including scholars like Carl Spitteler, Furneaux Jordan, and William James.

It is widely unknown, however, that in his development of Psychological Types, Jung (1960/1921) also referred to ancient Indian philosophy, addressing the Brahman idea of "the opposites" as well as that of the "unifying symbol". In this respect, Jung pointed to the Sanskrit concept of Dvanda, standing for a "pair of polarities", not only in a psychological, but also in a physical sense, indicating for example male vs. female gender. These were

established by the creator of the world, to whom Jung referred citing the Manava-Dharmasastra: "Moreover, in order to distinguish actions, he caused the creatures to be affected by the pairs (of opposites), such as pain and pleasure" (p. 207f.). Love vs. hate, hunger vs. thirst, and honor vs. shame were mentioned as further examples of polarities from which creatures are suffering in their present, carnal existence, whereas nirdvanda means to be liberated from them. In this sense, according to Jung, salvation will equal having reached a state of indifference towards the pairs of opposites or polarities.

In 1938, Jung visited India and got inspired by Buddhist spirituality and philosophy. During his stay, he was well aware of his European roots, and avoided to prematurely adopt what he would not have understood thoroughly. Still, as he put it in a concluding remark to his account of his journey, pointing to the conjunction of the East and the West: "India has left her traces within me, which are wandering from one infinity to another infinity" (Jaffé, 1981, p. 288).

In his theory of personality, Jung (1960/1921), in the first place, distinguished an extrovert from an introvert. While extroverts are guided by the outer world, introverts are directed by the impressions left by the outer world on the psyche, i.e., they are guided by inner images

rather than by given facts. For example, an extrovert will need people around him or her to spend enjoyable holidays, whereas an introvert might go to the mountains on his or her own. A second distinction referred to the way by which an individual obtains information, i.e., the "psychological functions": this can be done either by the immediate impression of the senses, i.e., visual, auditory, kinaesthetic etc. "sensing" or by "intuition", which Jung (1960/1921) called an "unconscious way of perceiving" (p. 480). Intuition occurs in a holistic way and thus, by its help, the individual recognizes facts as being "just there" without being able to give details, and how this knowledge had been attained. For example, whereas a "sensing" type will be able to remember exactly the clothing another person was wearing the day before, the intuitive type will have no idea about such details, but may be very good at "guessing" correctly what the other person's intentions were. The third distinction refers to decision making: while the "thinking" type decides on rational grounds, the "feeling" type is guided by emotions. Thus, the former will favor intellectual arguments, whereas the latter will prefer empathy as the personal guiding motive.

The Myers-Briggs Type Indicator (MBTI)

Based on Carl Jung's theory of psychological type, the Myers-Briggs Type Indicator, or the MBTI as it is known, was developed by Katherine Briggs and her daughter Isabel Briggs Myers in the United States in 1943. The idea behind the MBTI was to create a tool so that women who are entering the work force can identify the type of wartime jobs in which they would be most effective (Myers & Myers, 1995/1980). Neither mother nor daughter had training in neither psychology nor psychometric testing. It was for this reason that their work in the early years was not given professional credibility. Nevertheless, daughter Isabel Briggs Myers worked with psychometricians while also learned test construction, scoring validation and statistics progressively taking over the typological research first started by her mother. Myers'

work attracted the attention of the head of the Educational Testing Service, and in 1962, further receiving validation by institutions and consulting firms. In 1975, Consulting Psychologists Press took the MBTI publication, while the Center for Applications of Psychological Type (CAPT) became the research laboratory.

The MBTI fame is due to the fact that it offered the opportunity for assessing preferences and emphasizing the value of naturally occurring psychological differences to further understand personal differences, which exist in personal and professional relationships (Pearman & Albritton, 1997). However these preferences do not point to an all or nothing concept. Rather, the four preferences point to a more dynamic and fluid behavior in most situations. Through the MBTI tool self-awareness - in terms of the specific preferences that underlie one's values, needs, motivation, interests, and behaviours - is furthered (Kaplan & Saccuzzo, 2009).

Katherine C. Briggs and Isabel Briggs Myers expanded and elaborated on Jung's theory of personality types developing the MBTI questionnaire that offers the first form for assessing personality preferences using the three dichotomies that Jung described in his theory, supplemented with a fourth dichotomy added by Briggs and Myers. The four dichotomies that make up personality are:

- Extraversion/E and Introversion/I: focuses on attitudes
- (2) Sensing/S and Intuition/N, and
- (3) Thinking/T and Feeling/F: are considered the cognitive functions
- (4) Judging/J and Perceiving/P: focuses on lifestyle function, relate to how one likes to live one's life, i.e., one's orientation to the outer world.

The Judging/J vs. Perceiving/P dichotomy was added by Briggs and Myers in the 3rd Edition of the MBTI manual to label types. The Judging function relates to the two general processes of making decisions through Thinking and Feeling, whereas the Perceiving function refers to the two general processes of acquiring

information through Sensing and Intuition. (Myers, McCaulley, Quenk, & Hammer, 1998).

The MBTI tool allows one to identify a personality type made up of the four basic preferences identified by the four letters representing them (Kummerow & Quenk, 2003). The four basic preferences, combined to attitudes offer eight distinct cognitive functions. and the combination of these eight preferences result into 16 personality types. In other words, each of the four functions, i.e. Sensing/S, Intuitive/N, Thinking/T and Feeling/F can have either an external or internal world. For example. there could be an Extroverted Sensing (Se) or an Introverted Sensing (Si), or an Extroverted Intuitive (Ne) or an Introverted Intuitive (Ni). Each of these eight possible combinations express the way in which a function is manifested either in the internal or outer world.

According to Jung, people develop preferences identified in one of these mental functions that shape behaviours and personality patterns in order of importance or dominant functions. Through the MBTI tool these four preferences and the pairs of opposite preferences are assessed determining the individual's functions with the dominant being the first most preferred function; the auxiliary the second function; the third being the tertiary function, and the fourth being the inferior function. Each of these type codes and their permutations are expressed in a manner that is "natural" without any coercion or "active plan." In addition, the interpretation of the type code not only describes the dominant, auxiliary, tertiary, and inferior but also the least preferred functions described by Jung as the shadow. Those are the processes that are in the background causing an individual to be "in the grip" or stressed. These functions are expressed behaviourally as a reaction to certain situational experiences, or inter- and intra-personal interactions.

While the MBTI points to certain natural preferences, it is also important to remember that external influences can cause individuals to use preferences other than their natural ones. For example, family, societal and/or work pressures can cause a person to act like their

family, society or work styles are, even though the individual's natural preferences are different. It is for this reason, that Jung also pointed out in his type theory and Myers and Briggs added the inferior function to show that people in periods of stress or growth may experiment with new and more difficult behaviours pointing to different preferences than their own natural ones. Constructive type development means that people use their own preferences well and know when to strategize and use the other preferences appropriately. It is through the MBTI tool that individuals can expand their awareness and work toward the process of self-realization and individuation (Jung, 1973).

The MBTI is very well established in Asian countries like for example Singapore and Hong Kong, but especially in India, where in 2006 a MBTI certification program took place (Freeman, 2008). In India, the MBTI has been recently introduced especially as an instrument for personnel selection (see for example Singh, 2011; Sachin & Shefali, 2012; Tyagi, 2008).

Early studies on the importance of personality type for schooling

One of the most popular fields of application of the MBTI, besides economics and human resources, is schooling and education. For example, McCaulley (1974) reviewed literature and presented own findings from N = 3.275newly admitted students at the University of Florida: Introverts chose majors like Zoology or Forestry, whereas Extroverts preferred Psychology or Childhood Education. Among the college sample, Intuitive types were much more frequent than in the general population and also scored higher on performance tasks, especially when related to linguistic or theoretical demands. The authors also pointed to results, which indicated that among elementary school teachers, Sensing and Feeling types would prevail, whereas on high school and college level, the more intellectual Intuitive and Feeling types had posed the majority of teachers. McCaulley (1974) offered examples of specific types, citing from the MBTI manual (Myers, 1962):

"...ESFJ in high school: 'Warm-hearted, talkative, popular, conscientious, and interested in everyone, a born co-operator and active committee member. Has little capacity for analysis or abstract thinking, and so has trouble with technical subjects... Always doing something nice for someone in a practical way' (McCaulley, 1974, p. 4). She also gives a second, quite contrary, example:

"...INTP in high school... 'Quiet, reserved, brilliant in exams, especially in theoretical or scientific subjects. Logical to the point of hair-splitting. Has no capacity for small talk and is uncomfortable at parties... ...wouldn't care to be president of his class'" (McCaulley, 1974, p. 4). Similarly, Schroeder (1993) confirmed that IN types scored highest on the SAT, followed by EN, IS, and ES types.

The right person in the right place? Evidence since the year 2000

Almost half of the literature on the topic has developed after the year of 2000. A search on the APA database PsycINFO yielded a total of 384 results for the search terms MBTI & (school* or education* or teacher*); when the search was limited to entries from 2000 to 2013, still 176 results were obtained. As schooling and its societal conditions constantly change in the course of time, the older studies are of limited interest today. Only the more recent ones will be highlighted in more detail.

Students' personality: Academic achievement

In a review of the literature, Sak (2004) found that gifted high school students (total N = 5,723 from 19 samples) scored significantly higher on N, P, I, and T as compared to average students. Similarly, Barton (2005) as well as Cross, Speirs Neumeister, and Cassady (2007) found N and P types to be more common in such a sample. The latter result was also found by Folger, Kanitz, Knudsen, and McHenry (2003) in a sample of college students who had received scholarships in recognition of their academic excellence, but, contrary to the author's expectations, Thinking types were not overrepresented.

DiRienzo, Das, Synn, Kitts, and McGrath (2010) found in students from a variety of majors at university that, apart from students of Economics, academic achievement in Introverted, Feeling, and Judgment types on average was higher than in the respective opposite types. In contrast, in a sample of first year college students Sanborne (2013) found ENFP types to achieve significantly better than the remaining types, whereas Brown (2008) reported best results from Sensing as opposed to Intuitive and from Thinking as opposed to Feeling types in students using high-technology equipment in their classrooms. According to Kim, Kim, and Hur (2005), at Korean medical schools, Judging types performed better than Perceiving types.

Learning and teaching styles

Others studies examined the role of Psychological Type for choosing specific learning and teaching styles (e.g., Salter, Evans, & Forney, 2006). Capretz (2002) developed recommendations for teaching methods, tasks, and assignments in order to reach different personality types among students of software engineering. For example, for Sensing Types the suggestion reads: "As they rely on experience rather than on theory, provide sensors with ... practical examples each time they face a new concept. Use audio-visuals..." (p. 136), whereas for the contrary, the Intuitive type, the recommendation is: "As they need opportunities to be creative and original, challenge intuitive students with problem-solving activities for which there are multiple solutions or different perspectives" (p. 136). Jessee, O'Neill, and Dosch (2006) found that Judging and Sensing types were the most common ones among dental students and developed recommendations for teaching the various types most effectively. Malloy (2009) examined learning styles in nursing students and found that Introverts preferred an independent learning style, whereas Extroverts preferred an interactive one; Feeling types preferred spontaneous and Judging types a highly structured learning style. Replicating results by Ehrman and Oxford (1989),

Wakamoto (2007) found different strategies for learning English among Japanese students; for example, Extroverts rather than Introverts used "socio-affective" strategies in language learning. Feeling types were more satisfied than Thinking types with certain aspects of Web-based instruction (Lucas, 2007), and psychological type predicted achievement in hypermedia teaching (Ellis, Howard, & Donofrio, 2012). Introverts, however, did not differ from Extroverts with respect to their choices of traditional versus online learning in business courses (Toole, 2007). According to Kelly and Lee (2005), among undecided first year university students, E, N, and P types were over-represented and Fields (2003) found that Thinking rather than Feeling types reported cheating at college.

Teachers' personality

Less evidence has been accumulated with respect to the personality of faculty. In a study by Radmacher and Martin (2001), teachers' Extraversion predicted positive evaluation by their students. Rushton, Morgan, and Richard (2007) found an exceptionally high proportion of ENFP und ENFJ profiles in a sample of teachers who had been nominated for their excellence by their colleagues. The authors go into some detail in praising their teaching style: "Upon entering an ENFP's classroom one would notice a wide range of teaching strategies such as class discussions, class and team building activities, cooperative learning strategies, and an emphasis placed on divergent thinking" (p. 439). Similarly, Rushton, Knopp, and Smith (2006) reported that ENFP profiles and the pairs of EP, SF, NF, SJ, and NP were statistically overrepresented in recipients of "Teacher of the Year" awards. Downs (2013) found that ESTJ profiles were the most common ones among school leaders. They found no relationship, however, between the school leaders' Psychological Types and their ability to motivate students to use classroom technology. Munro, Chilimanzi and O'Neill (2012) examined Psychological Types and virtues in South African peer counsellors and found that E types tended to be humorous and curious, whereas for the N types excellence and appreciating beauty were the most important virtues. Feeling types, as

opposed to Thinking types placed much value on loving and being grateful.

There must be more to it: Students' and teachers' personalities interacting

Congruence

Interaction of personality traits has been examined, for example within marital relationships. This research on "assortative mating" has shown that, for example, intelligence, openness to experience, agreeableness and conscientiousness (Escorial & Martín Buro, 2012), religiosity and political conservatism (Watson et al. 2004) among couples are correlated positively. Nordvik (1996), however, did not find assortative mating for any of the MBTI dimensions. According to Choi, Deek, and Im (2009) similarity with respect to MBTI types did not predict various aspects of satisfaction and compatibility within working teams. Clack, Allen, Cooper, and Head (2004) found marked differences between the type preferences of British medical doctors and their patients, and concluded that patient-doctor communication could be affected in a negative way by this incongruence.

In the case of students and teachers, similarities with respect to personality could be advantageous. Indeed, Mills (2003) found in a sample of 1,247 highly gifted students and 63 of their teachers that both groups, students and teachers, showed a preference for Intuition (N) and Thinking (T). Cross et al. (2007) pointed to the fact that highly gifted students need teachers who are able to provide to them what they need, avoiding misunderstanding and insufficient workload, and also offering the Perceiving type students the necessary degree of independence.

With more representative samples in mind, however, for the then schooling system in the USA, already Schroeder (1993) had pointed to the opposite problem, namely the discrepancy of mostly IN type teachers instructing predominantly ES students at college and university: "Concrete active (ES) learners come to class seeking direct, concrete experience [...], they value the practical and the immediate [...]. Their IN instructors, on the other hand, prefer the global to the particular, are stimulated by the realm of concepts, ideas,

and abstractions, and assume that students, like themselves, need a high degree of autonomy [...] ...and it may be that this basic incongruence is the root of the dilemma in today's college and university classrooms" (p. 25).

Learning from opposites

Although the idea of matching students and teachers could be appealing, Mills (2003) also pointed out that it might be somewhat unrealistic under everyday conditions of schooling. Also, from an educational point of view, students should rather learn to adapt to different teaching styles and the personality types related to them. The author points out to the importance of being able to deal with personality features contrary to one's own, and of developing one's personality in a flexible way in order to meet a multiplicity of requirements in life. Similarly, Moore, Dettlaff, and Dietz (2004) reflected on supervision styles among field instructors in social work and suggested that differences in Psychological Type should be appreciated and respected. They also pointed to the helpfulness of learning to act contrary to one's type.

There still is more to it: The importance of culture

The work of Jung has particular significance for psychology in the East as it provides a basis how gnosis and logos are intricately woven in human thinking (Pirta, 2014). A significant aspect of Jung's work that has lost attention of psychologists is the concept of association and its measurement. The most important thing regarding this concept is that it is central to psychology and also to eastern psychologies. As far as the first aspect is concerned, this empirical insight came during the early part of Jung's career. Jung's experiments on word association and measurement of galvanic skin response foresaw developments in modern clinical practice and "anticipated methods in cognitive psychology and behavioral neurology" (Compston, 2011). Even now in clinical (Upmanyu, Bhardwaj, & Singh, 1996) and forensic psychology (lie detection) in India as well as other parts of the world, this procedure is in vogue to gain some insight about hidden complexes in a client. At the same time, in verbal learning experiments, it is imperative to find out the associative value of words used in an experiment.

References

- 1 "...das Leben ist nur von Einzelnen getragen, es existiert an sich nicht; es gibt kein Leben von Millionen, das ist Unsinn – sondern, Millionen von Individuen sind Lebensträger" (Jung, 1960, 04:25 to 04:33)
- Barton, V. (2005). Myers-Briggs Type Inventory, birth order, and the association between the two variables in high school gifted students. Dissertation Abstracts International Section A: Humanities and Social Sciences, 66 (6-A), 2099.
- Brown, L. H. (2008). Using personality type to predict student success in a technology-rich classroom environment. Dissertation Abstracts International Section A: Humanities and Social Sciences, 67 (6-A), 2066.
- Capretz, L. F. (2002). Implications of MBTI in software engineering education. *SIGCSE Bulletin*, 34, 134 137.
- Choi, K.S., Deek, F.P., Im, I. (2009). Pair dynamics in team collaboration. Computers in Human Behavior, 25, 844 – 852.
- Clack, G.B., Allen, J., Cooper, D., & Head, J.O. (2004). Personality differences between doctors and their patients: implications for the teaching of communication skills. *Medical Education*, 38, 177 – 186.
- Compston, A. (2011). From the archives. Brain, 134, 1580-1584.
- Cross, T. L., Speirs Neumeister, K. L., Cassady, J. C. (2007). Psychological type of academically gifted adolescents. *Gifted Child Quarterly*, *51*, 285 294.
- DiRienzo, C., Das, J., Synn, W., Kitts, J., & McGrath, K. (2010). The relationship between MBTI (R) and academic performance: a study across academic disciplines. *Journal of Psychological Type*, 70, 53 67.
- Downs, R. (2013). A study of school leaders and how they impact classroom use of technology. Dissertation Abstracts International Section A: *Humanities and Social Sciences*, 37 (8-A) (E).
- Ehrman, M. & Oxford, R. (1989). Effects of sex differences, career choice, and psychological type on adult language learning strategies. The Modern Language Journal, 73(i), 1 – 12.
- Ellis, H., Howard, W. G., & Donofrio, H. H. (2012). The

- effects of gender and dominant mental processes on hypermedia learning. *Journal of Educational Multimedia and Hypermedia*, 21, 359 369.
- Escorial, S. & Martin-Buro (2012). The role of personality and intelligence in assortative mating. *The Spanish Journal of Psychology, 15*, 680 687.
- Fields, M.U. (2003). The influence of psychological type, self-esteem, and gender on academic dishonesty of students in higher education. Dissertation Abstracts International Section A: Humanities and Social Sciences, 64 (3-A), 737.
- Folger, W., Kanitz, H., Knudsen, A., & McHenry, S. (2003). Analysis of MBTI type patterns in college scholars. *College Student Journal*, *37*, 598 603.
- Freeman, D. (2008). The MBTI® Instrument in Asia. Memories and Observations over 20 years. Oral presentation at the MBTI® Asia Conference Singapore. http://www.hc.com.sg/pdf/David%20 Freeman.pdf. Retrieved on 2nd August, 2013.
- Jaffé, A. (Ed.) (1981). Erinnerungen, Träume, Gedanken von C.G. Jung. Aufgezeichnet und herausgegeben von Aniela Jaffé [Memory, dreams, reflections by C.G. Jung. Recorded and edited by Aniela Jaffé]. 11th printing. Olten and Freiburg im Breisgau (Germany): Walter.
- Jessee, S.A., O'Neill, P. N., & Dosch, R.O. (2006). Matching student personality types and learning preferences to teaching methodologies. *Journal* of Dental Education, 70, 644 – 651.
- Jung, C.G. (1960). C.G. Jung im Gespräch mit Georg Gerster [C.G. Jung, interviewed by Georg Gerster]. (3/5). Audio. http://www.youtube.com/ watch?v=mWWkJQLp2i8. Küsnacht (Switzerland). Retrieved on 28th July, 2013.
- Jung, C.G. (1960/1921). Psychologische Typen [Psychological types]. Gesammelte Werke [Collected works], vol. 6 (9th, revised printing). Zurich (Switzerland) and Stuttgart (Germany): Rascher.
- Jung, C.G. (1973), *The psychology of C.G. Jung*. New Haven and London: Yale University Press.
- Kaplan, R.M., & Saccuzzo, D.P. (2009). Psychological testing: Principle, applications, and issues. Belmont, CA.: Wadworth.
- Kelly, K.R. & Lee, W.C. (2005). Relation of psychological type to career indecision among university students. *Journal of Psychological Type*, 64, 11-20.
- Kim, S., Kim, J.H., & Hur, Y. (2005). A proposal on educational method of studying by comparing

- medical students' personality types and class achievement. Korean. For English Abstract see http://www.koreamed.org/SearchBasic.php?RID=1097KJME/2005. 17.2.107&DT=1. Retrieved on 31st July, 2013.
- Kummerow J. M., & Quenk N. L. (2003). Understanding Your MBTI Step II Results: A step-by-step guide to your unique expression of type. Palo Alto, CA: CPP, Inc.
- Lucas, D. J. W. (2007). Personality type relationship to performance and satisfaction in web-based instruction (WBI). Dissertation Abstracts International Section A: *Humanities and Social Sciences*, 68 (6-A), 2304.
- Malloy, H. D. (2009). The relationship of learning style, academic achievement, and psychological type of baccalaureate nursing students. Dissertation Abstracts International Section A: Humanities and Social Sciences, 69 (7-A), 2631.
- McCaulley, M. H. (1974). The Myers-Briggs type indicator and the teaching-learning process. Paper presented as an introduction to a symposium entitled: "Personality variables in the teaching-learning process" at the Annual Meeting of the American Educational Research Association, April 18, 1974 at Palmer House, Chicago, IL. http://www.eric.ed.gov/PDFS/ ED093965.pdf. Retrieved on 27th July, 2013.
- Mills, C. J. (2003). Characteristics of effective teachers of gifted students: Teacher background and personality style of students. *Gifted Child Quarterly*, 47, 272 281.
- Moore, L. S., Dettlaff, A. J., & Dietz, T. J. (2004). Using the Myers-Briggs Type Indicator in field education supervision. *Journal of Social Work Education*, 40, 337 – 349.
- Munro, N. Chilimanzi, Y., & O'Neill, V. (2012). South African Journal of Psychology, 42, 15 24.
- Myers, I. B. & Myers, P. B. (1995/1980,). Gifts differing: Understanding personality pype. Mountain View, CA.: Davies-Black Publishing:
- Myers, I. B. (1962). Manual: The Myers-Briggs Type Indicator. Princeton: Educational Testing Service.
- Myers, I. B., McCaulley, M. H., Quenk, N. L., & Hammer, A. L. (1998). MBTI Manual: A guide to the development and use of the Myers Briggs Type Indicator. 3rd Edition. Palo Alto, CA: Consulting Psychologists Press.
- Nordvik, H. (1996). Similarity between partners in real and perceived personality traits as measured by the Myers-Briggs type indicator. *Scandinavian*

- Journal of Psychology, 37, 444 450.
- Pearman, R. R. & Albritton, S. C. (1997). *I'm not crazy, I'm just not you*. Palo Alto, CA: Davies-Black Publishing.
- Pirta, R. S. (2014). Yoking gnosis and logos: On the knowledge function of some exceptional mental states for well-being. Psychological Studies, DOI 10.1007/s12646-013-0210-1.
- Radmacher, S. A. & Martin, D. J. (2001). Identifying significant predictors of student evaluations of faculty through hierarchical regression analysis. *The Journal of Psychology; Interdisciplinary and Applied, 135, 259 268.*
- Rushton, S., Knopp, T. Y., & Smith, R. L. (2006). Teacher of the Year Award recipients' Myers-Briggs personality profiles. Identifying teacher effectiveness profiles toward improved student outcomes. *Journal of Psychological Type*, 66, 23 34.
- 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.
- Sachin, R. & Shefali, D. (2012). A Study of Business Education and Entrepreneurial Capabilities in Central India. *Research Journal of Management Sciences*. 1, 56 59.
- Sak, U. (2004). A synthesis of research on psychological types of gifted adolescents, *Journal of Secondary Gifted Education*, 15, 70 79.
- Salter, D., Evans, N. & Forney, D. (2006). A longitudinal study of learning style preferences on the Myers-Briggs Type Indicator and Learning Style Inventory. *Journal of College Student Development*, 47, 173 – 184.
- Sanborne, D. K. (2013). Myers-Briggs(R) preferences and academic success in the first college semester. Iowa State University Digital Repository. Graduate Theses and Dissertations. http://lib.dr.iastate.edu/etd/13095/. Retrieved on 26th July, 2013.

- Schroeder, C.C. (1993). New students New Learning Styles. *Change*, 25, 21 26.
- Sim, H.S., & Kim, J.T. (1993). The development and validation of the Korean version of the MBTI. *Journal of Psychological Type*, 26, 18 27.
- Singh, A.K. (2011). An empirical study on the effect of age, qualification and upbringing upon the personality of managers in terms of performance indicator using MBTI-dichotomy in BPO sector at Delhi, India. International Journal of Transformations in Business Management, 1. Published online at http://ijtbm.com/webmaster/upload/Jul_2011_Ashish%20Kumar%20Singh.pdf. Retrieved on 2nd August, 2013.
- Toole, J.M. (2007). The academic performance of introverted and extroverted students in traditional and online business courses: An analysis based on the Myers-Briggs Type Indicator. Dissertation Abstracts International Section A. Humanities and Social Sciences, 68 (4-A), 1555.
- Tyagi, A. (2008). Personality profiles identification using MBTI test for management Students: An empirical study. *Journal of the Indian Academy of Applied Psychology, 34*, 151-162.
- Upmanyu, V. V., Bhardwaj, S., & Singh, S. (1996). Word association emotional indicators: Associations with anxiety, psychoticism, neuroticism, extraversion and creativity. *Journal of Social Psychology*, 134, 521-529.
- Wakamoto, N. (2007). The impact of extroversion/ introversion and associated learner strategies on English language comprehension in a Japanese EFL setting. Dissertation Abstracts International section A. Humanities and Social Sciences, 68 (6-A), 2293.
- Watson, D., Klohnen, E.C., Casillas, A., Simms, E. N., Haig, J., & Berry, D. S. (2004). Match makers and deal breakers: Analyses of assortative mating in newly wed couples. *Journal of Personality, 72,* 1029 1068.

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