



Aptitude and Intelligence are not Fixed, So, Why Aptitude and IQ Tests? A Challenge from Multiple-Intelligences and Dynamic Assessment Perspectives

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ABSTRACT

That intelligence is not static rather dynamic and changeable, so that human being has a wide range of- rather than a restricted set of- capabilities all potentially developable (Gardner, 1983) and that socio-cultural agencies and mediating tools (Derry, 2013) shape and extend the expanse of existing capability to an actualized status were the main impetus to claim that aptitude is not likewise stable. Hence, the psychometrically fixed properties of aptitude test and nature of IQ came to be examined and challenged as the main aim of this study. In the quest to develop the abilities of the test takers in the light of formative assessment, aptitude test in its present form and function, as a psychometric tool routinely applied for student selection and placement, may be considered as biased, for it restricts and forestalls the potential evolution of the ability of the test takers. The argumentative results of the current study reveal that the era of exclusive speculation in the context of standardized tests at the price of the exclusion of socio-culturally-triggered pedagogical agendas and measures has expired, the former being associated with first test, then jump to the conclusion by virtue of a single numeric value and the latter underpinning the socio-culturally embedded motivational variables and alternative assessment. By theoretical implication, the predictive and consequential validity of aptitude test and IQ test are open to debate, being a possible incentive to the researchers to further explore the controversially decontextualized nature of aptitude and IQ test.

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Introduction

During the 1930s, efforts were made in the USA to design a test to exclude unqualified learners from high school foreign language classes. The work by John Carroll and colleagues led the initial language aptitude test (Spolsky, 1995). By definition, it is a kind of prognostic test serving the purpose of applicants' success or failure in accomplishing a specified goal, being hence premised on identifying the learners with the likelihood of success (Mousavi, 2012). Over the years, a number of studies within the field of SLA have shown that degree of language aptitude is a reliable source for learning a language and for shaping the efficiency of pedagogical techniques (Bylund & Ramirez- Galan, 2014), but the problem with aptitude test, as we take the view here, lies with its underlying theoretical underpinning; thus, that it is used for failure or success without taking account of the dynamically interacting variables for assessment (Lantolf & L.Thorne, 2006) sounds to be of huge room for controversy.

As an initial example, Mousavi (2012) has cited that language aptitude is more in line with acquisition rather than with use: This is more debated because communicative competence developed by Hymes (Ellis, 2008), in reaction to Chomsky's linguistic competence, is purported to be symmetrical rather than asymmetrical with language use and communication. Vividly, aptitude test arises purely from psychometric properties and can be prone to argument as regards its validity. The point is well-supported by Mackintosh

(2013), stating that to think that the findings of psychology are secure and not subject to dispute is an abortive and futile notion, even when the data are generally accepted. Evidentially, the view that aptitude test is of no general and wide-spread consensus is advocated by Zeidner (1987), attesting to the reality that Scholastic Aptitude Test is biased in reference to the construct and predictive validity. Likewise, Morris and Maisto (1999) have fundamentally criticized the academic performance of the learners among the members of various cultures. On the similar hand, Furnham, Moutafi and Chamorro-Premuzic (2005) state that one problem with psychometric tests is that there are lots of competing theories of structure of intelligence.

All these taken and while the issue of the validity of aptitude Test and its being biased have been accorded considerable attention, few attention has been paid to the social consequences, i.e., consequential validity as to the use and decision making agendas (Messick, 1995a, 1996b) of aptitude or intelligence as well as the nurturance and development of aptitude or intelligence, rather heed has been taken more of the static view of aptitude and intelligence hallmarked within a single score. Concretely viewed, Kuo, Maker, Su and Hu (2010) argue to the disadvantage of standardized tests, such as intelligence tests and achievement tests as commonly-used assessment tools, stating that they are not well-suited to the measurement requirements and there is hence a call for some other assessment tools, such as parent

observation, teacher observation, teacher recommendation, and portfolio assessment.

Along this line, Akbari and Hosseini (2008) maintain that the traditional intelligence-based tests are disputable in nature and narrow in scope, so that understanding intelligence and aptitude of the learners from Gardner's (1983) multiple intelligences theory is well-fitted to applied linguistics because his preference is for holistic assessment of integrated functioning (Messick, 1992). A more detailed view is more illuminating by Morris and Maist (1999), stating that, intelligence attributed to heredity is concerned with a narrow set of skills, for intelligence is far too complex to be precisely measured by tests.

In clear words, aptitude test as a high-stake test in line with practical and economical validity has been more prevalent and that this test is elsewhere in the world widely used and is now also employed under the general rubrics of aptitude test (Spolsky, 1995) is of no unanimous support, at least in social consequences and decision making terms, in our belief. In this supportive line, Human beings' capabilities, from our vantage-point, cannot be included in psychometrics; that is why a recourse to Bachman and Palmer's (2000) stance as to humanization of testing process on the one hand and modifiability of learners' performance during assessment (Lantolf & L.Thorne, 2006) on the other hand come to the forefront. Therefore, notwithstanding a rich repertoire of socio-culturally supportive evidence in the development of the abilities of the learners as well as test takers, a dearth of study was considered, urging a call to address the existing gap.

1. The Debated Origin of Fixed Constructs

Historically, but more effectively, two researchers have opened the doors of discussion on intelligence to debate: Gardner and Sternberg. The former, in his book titled "Frames of Mind", challenged IQ, stating that intelligence is not fixed, rather changeable and feasible to maximize in context and the latter moved the discussion of intelligence, as an abstract construct to "Triarchic theory of human intelligences, stating that we should move beyond IQ (Messick, 1992). He seeks to argue that the two worked in tandem with each other, so that dramatic changes were undertaken by educators to hotly discuss the issue. In another arguable line, Neto and Furnham (2011) state that IQ associated with fixed view of intelligence does not take into consideration the individual's ability in particular fields of study; to them, this is what recent theories also attest to and move from g to multiple-intelligences. Along the same line, Neto, Furnham and Pinto (2009) indicate the cultural differences in estimating the intelligence, proving that intelligence is not fixed. As we discuss in detail below, new theory is suggestive of abandoning the discussion of whatever in relation to considering human ability as being fixed. Rather, in one way or another, a variety of interrelated factors can affect a phenomenon, here, the ability of the test takers. Therefore, at issue here is, we should consider a plethora of context-relevant elements in assessing the ability of the test takers, heralding a move from testing to assessment (Gipps, 1994). An effective instance by Messick (1992) is that in addition to the biological and cultural support to human intellect and ability, bio-cultural and bio-environment issues, which are embedded in personal interest and motives, must also be taken account of.

In conjunction with the foregoing view, that the genetic ability, such as intelligence, and aptitude, are taken-for-granted fact, there is no uncertainty. But the way they are tested and boosted, the potential of brain growth and that they are affected by the surrounding environment come to view.

The matter at hand stresses the need to the ignorance of paying absolute attention to the heredity of the intelligence in favor of considering it in context (Chan, 2003). Instead, it acknowledges the strategically and stylistically different inclinations of the learners as far as their weak points and strong points are concerned. Noticed deliberately and consciously, the starting point for any discussion of MI responsible for materializing the potential talent of the disabled learners is the conceptualization that learning disabilities occur in all eight intelligences.

Basing the assumption on the afore-cited issues, Gardner's (1983) definition of intelligence is more effective: "Intelligence has more to do with the capacity for solving problems and fashioning products in the context rich and naturalistic setting; the definition hence indicates a pluralistic view of the mind recognizing many different and discrete facets of cognition, acknowledging that people have different cognitive strengths and cognitive styles.

Another convincing piece of evidence follows that, IQ scores correlate with brain structure and function since brain structure and IQ have genes in common (Haier, 2013). He seeks to stress that the brain is the universe and there are trillions of synapses in a single brain, so that g-factor, i.e., intelligence, is like a dark matter; by inference, it is there and is not prone to direct measurement; so, in our beliefs clearly, no suspicion lies in terms of its significance, as can be the case with aptitude. One partial reason for the indirect measurement of intelligence is that it can be maximized and is dramatically affected not only by genes, but also by environment (Gardner, 1983; Mackintosh, 2013; Haier, 2013).

The point is also well-advocated by boot-strapping view, a process whereby memory and learning mutually influence each other (Williams, 1999). The theory of boot-strapping bears some relationship with the development of intelligence and aptitude since environment affects intelligence and aptitude or the capabilities of the learners and on the other hand, use of intelligence in a creative way affects the context in which people live. In supportive vein with this, Blomberg (2009) states that intelligences, in plural form, begin as potentials, and become abilities' when culturally activated. The way we observe it, aptitude can be considered the same as intelligence, not in definition rather in the reality that both are genetically-wired and socio-culturally prone to development. A point worth deliberation here is what the cognitive psychologists hold: They consider just the intellect without considering what is the right thing to do (Blomberg, 2009). This latter point is what we believe to be associated with social consequences and predictive validity (Bachman, 1995; Messick, 1995). So, the traditional view of intelligence has been diametrically criticized to the benefit of the recent view of intelligence considering mind of several mental representations, such as images, schemes, pictures frames, languages, ideas, and so forth (Miller, 2002). To put it on a more concrete footing, there is now a general recognition of the fact that intelligence is not fixed; aptitude is not constant; they are multifaceted and connected to the outside world (Genesee, 2000). By inference, aptitude is also constant.

So, if we value the learners with reference to their scores resulted from their genetically-inclined profiles, rather than their socially mediated and culturally nurtured capabilities, the principles of codes of conduct, and ethical issues (Messick, 1992a, 1995b, 1996c) are violated. On the other hand, the opportunity for their potential future success is blocked. Moreover, the made-decision resulting from test performance either at micro-level or macro-level (Bachman & Palmer,

2000) gets defect and default. This is cogently advocated by Chan (2006), maintaining that conventional psychometric and standardized measures only assess a small part of the total spectrum of abilities; on the identical side, assessment from multiple-intelligence theory suggests alternative assessment techniques, such as performance-based, self-report, portfolio assessment (Gardner, 1983).

In the quest to this line of controversy, Gardner (1983)- upon acknowledging the existent nature of general intelligence, called *g*, revolutionized the circle of intelligence view, bearing on the debate that intelligence as a cognitive tool should move *beyond fixed score* (*italics added*) to educational activity aiming to improve and boost the aptitude, performance and capabilities of the individuals; this is what has also more strongly been favored by Sternberg (Messick, 1992).

As our perception allows to state, the mentioned thread of speculation above can in the end extend potential assessment associated with affective variables and be mediated by mediating tools either for instruction or assessment- in numerous fashion, dynamically diagnosing the fully developed abilities, i.e., actual aptitude and the potential abilities being still in the process of developing (Vygotsky, 1978). In reality, informed by Zone of Proximal Development, dynamic assessment orients a foundation for supporting development; so, it develops the process of development, rather than the conventional assessment stressing the product (Lantolf & Poehner, 2010; Poehner, 2007).

A close scrutiny referring to 1983 by Gardner (1983) runs a symmetrical line, indicating that putting the capabilities or intelligence of the individual learners into a single score by dint of standardized testing as a static and uni-faceted instrument is of controversial power. The state of the arts is typical of the fact that, based upon the most tangible findings both empirical and theoretical ones, multiple and various intelligences demanding a variety of approaches and instruments for assessment must be taken account of, this being contrary to a general and fixed view of intelligence (Christison, 1998; Armstrong 2003; Alvis et al., 2004).

Given this position, the definitional frame of intelligence is along the psycho-biological line *deemed as potential gene* (*italics added*) for species to process certain kinds of information and certain kinds of problems in certain kinds of ways (Gardner, 1983); but processing and assessment are not done in a single way (Poehner, 2007)- if so misleading it will be- being suggestive of a single mind and a single capacity to solve the problems, rather we must think of a variety of ways for confronting a numerous number of problematic situations (Gardner, 1983).

In connection with the difference between aptitude and intelligence, Abrahamsson and Hyltenstam (2008) state that "language learning aptitude is generally defined as a largely innate, relatively fixed talent for learning languages which is independent of other factors, such as general intelligence, personality, attitudes toward the language to be learned, and the motivation to learn it. But, implicit in the present definition is the word "fixed and largely innate"; the implication is hence that the innate capabilities are possible to be boosted the evidence of which comes also from multiple-intelligence theory (Gardner, 1983) and sociocultural theory (Vygotsky, 1978; Derry, 2013).

Clearly, there seems to be a dramatic change in the interpretation and application of the frame of mind. The interpretation is derived from Gardner's' culture-based definition of intelligences which challenges the first

intelligence tests (Armstrong, 2000). Following Gardner's notion, the traditional and mono-dimensional views of intelligence including a narrow range of abilities (Christison & Kennedy 1999, p.1) have been superseded by the most recent views of intelligence which contain a wide range of abilities because none of the previous views of intelligence have dealt very well with the role of knowledge, affect and motivation in intellectual life (Messick, 1992).

Due to these drawbacks affiliated to IQ test and prognosis, i.e., aptitude testing, Symonds was on the position that prognosis or aptitude testing related tests illustrated in the form of score, as with IQ score, adds little to the prediction. As the whole body of research conducted respectively by Sister Virgin Michel and Tallent indicated, IQ scores alone were not good predictors of foreign language aptitude and IQ tests suffer from low validity (as cited in Spolsky, 2000). This is contrary to MI model: The major tenet of MI is to cultivate and enrich each individual's dominant intelligences and strengthen the weaker ones, so, being conducive to understanding students' preferences and a greater appreciation of their strength (Alvis et al, 2004; Armstrong, 2000; Veenema & Gardner, 1996).

Established on the preceding argument, it is sought to be addressed that: Are the language learning aptitude and intelligence fixed and unchangeable? Since the beginning of discrete-point tests, other approaches, such as integrative tests, communicative tests, etc., plenty of improvement is said to have been placed on language testing methodology. If so, why intelligence test and IQ test are still at issue? What changes have these approaches exerted on the way abstract constructs, such as aptitude and intelligence, are tested? If these constructs are considered fixed and also if aptitude test is strictly administered and based on which decision is made, it sounds axiomatic that the findings of testing approaches and teaching approaches have very little contributed to motivating the test designers or to inspiring the theoreticians for further exploration. In instruction terms, to raise some other prompts: What is the role of more expert in the development of the novice in both teaching and testing terms? What part do contextual and cultural factors play in shaping the learning nature and boosting the learning expanse? What about the role of explicit instruction in language learning? What about the role of cognitive styles and language and communication strategies in language learning? If testing is considered as a kind of learning, how is this evidenced in aptitude and IQ test? These are some thought-provoking questions which pave the way for challenging the role of aptitude test and IQ test in making decision, the former in success or failure mode and the latter in single-score more, both of debated origin. The following delves into moving from mental context to social context in precise detail.

2. Aptitude and intelligence are prone to development An account from socio-cultural and MI perspectives

The question remains as to either aptitude is subject to development and change or is fixed; the blunt response lies vividly in the fact that assessment and instruction should be dialectically integrated so as to move towards an emergent and dynamic performance: Putting the potential into an actualization with use of mediation (Lantolf & L.Thorne, 2006) through instructional practice because changing teaching strategies without assessment evens is near impossible (Stanford, 2003). In effect, truly supportive to this is partially otherwise than whatever has been adduced to aptitude test since researchers (Armstrong, 2000, Christison, 1998) make the point that intelligence is not a matter of

disabled and enabled children. The claim is due fully to the fact that people are gifted many kinds of minds. If decapacitated with one mind, the other minds can be developed. Hence, there is more to the point than psychometric tests claim.

The issue fits appropriately with an interactive type of assessment, informed by Vygotsky's socio-cultural theory (Lantolf, 2009) and measures the learning potential with reference to the fact that the assessor is a mediator, according to which the test takers are scaffolded and guided from one zone of potential to another actualized domain (Poehner, Zhang & Lu, 2014; Poehner,2007; Van Compernelle & Williams, 2013; Davin, 2013).

If aptitude test predicts the ability to do a specific future course while it is viewed constant, all the above anecdotes associated with modern theory run hence contradictory to the very nature of aptitude test. A rule-of-thumb fact is that the story of nature plus nurture and nature (Brown, 2000, 2001) minus nurture are long-lasting issues provoking the thoughts, being inclined to the former. On the other hand, there are some other affective and emotional variables (Sparks et al., 1988), which can affect our language aptitude and competence. If aptitude is considered fixed, the concluding remark seeks to mark that it is neither developable nor changeable. Pedagogically, this runs counter to what Gardner (1983) holds. He states that we have different capabilities and all these abilities are feasible to be nurtured and developed, so that the aim of the curriculum should be to enable all learners to achieve their full potential (Gouws, 2008) and it is our duty as educators, *or tester (Italics added)*, to recognize and nurture all the varieties of human abilities or combination of them.

More cogently, Gouws (2008) states that linguistic and logical-mathematical profiles are tested by intelligence tests, so that abilities should be expressed in a person's performance, not in a single score. In support of this, Blomberg (2009) is on the position that reliance on logical-mathematical and linguistic competence is separation of abstract world from concrete world because according to the theory of cultural intelligence and cognitive self-regulation (Thomas, 2008), human being can move beyond the boundaries of number via the culturally interactive abilities. So, from our vantage-point, conventional tests (IQ and aptitude tests) separate us from the concrete world. Our clear argumentation-without doubt rarely does a research deny now, is that why is aptitude tested with reference to genetic elements rather than with a view to cultural and social variables? The response lies in the effect of environmental factors (Morris & Maist, 1999), not only after birth but also before birth, on human being.

This runs counter to the old belief that aptitude test predicts the occupational or placement-for-program objectives.

More persuasively, MI is associated explicitly with those instructional perspectives which place emphasis on individual differences, preferences and styles through whole-brain based view of learning, so that whole portions of the brain can be nurtured and used (Armstrong, 2000). Consequently, MI furnishes the teachers and learners with a variety of means according to which acknowledgement and analysis of individual learners' needs, interests and strategies would be facilitated.

Following the issue connected to intelligence and aptitude, in a firm support, Gardner (1983) in his first book titled " Frames of mind", proposed a variety of frames, minds, capabilities under the general heading of intelligences in plural form, rather than the traditionally-taken intelligence in

singular form, being eventually labelled multiple intelligences theory or MI model. He believed that these intelligences must be assessed by a variety of approaches in a right direction in which the whole range of learners' capabilities can be developed and boosted. This foundation laid, ignorant of plurality of potentially worthwhile and invaluable capacity gifted with the human beings, i.e., different kinds of minds, seems to downplay the fixed view of intelligence and the latent merit of mental initiatives (Gardner, 1991; Armstrong, 2000). Hence, the static view of talent, in this vein, seem also to be downplayed. To put the point in another word, learners are gifted with mentally infinite number of ways in which they can exercise impact on the world and learn as they favor. To elaborate on the issue with an example, Gardner worked with individuals whose specific areas of the brain were impaired. But in several cases brain lesions seemed to have selectively impaired one intelligence while leaving all the other intelligences intact (Armstrong, 2000).

The premise is that the age of individualism taking account of the individual values, preferences, styles and strategies (Akbari & Hosseini, 2007; McMahan, Rose, & Parks, 2010; Goldman & Schmalz, 2003;Ghamrawi, 2014; Greenhawk, 1997) within the framework of Multiple intelligences theory either in assessment terms or instructional design, being supportive of the fact that aptitude test as a subtest or a main test to exclude the weak learners from the circle of particular course is in contradiction with Gardner's multiple-intelligences theory and Vygotsky's socio-cultural theory. The researchers argue that to administer an aptitude test is to limit the potential capabilities of the individuals. Therefore, the fact that intelligence or aptitude is affected by the environment and socio-cultural issues, as the individuals are to be mediated and move from one continuum of aptitude/intelligence to another end of the aptitude/intelligence is the main tenet demanding further attention and investigation.

If the aptitude test is to test the abilities of the individuals in as predictive terms as possible or for future occupational perspective and potential academic promises, then, the developments taking place since 1930 so far in the realm of language testing, such as performance assessment, assessment tools, triangulated approach to assessing the intended construct and portfolio assessment (Gipps,1994; Stanford, 2003) as well as other kinds of assessment instruments are just of surface justification with no consequential and pragmatic validity! Is it feasible to set aside the findings of language testing and just suffice for aptitude test predicting the potentials of the individuals for either success or failure with studying a particular language or a particular course? What about the impact of generally accepted socio-cultural theories and motivational theories on the abilities of the individuals?

On an extended note, the related theoreticians and educators take diametrically a revolutionary stance on the assessment of the ability of the individuals in various fields (Lantolf & L.Thorne, 2006; Gardner, 1983). They are bound to restructure the way in which educators assess their students' learning process. In the strict sense of the word, the fundamental restructuring of assessment system is the end-product of movement from artificial assessment to the natural assessment (Armstrong, 2000). She continues to note that the implicit tenet underlying MI assessment is "authentic assessment", which emphasize assessing what the students know (knowledge) and what students do (performance). This is contrary to what is conventional in IQ tests and aptitude tests, both of which consider just what the individuals have not.

The contrary matter at issue is clearly evidenced also by Stanford (2003) under the overt rubric that MI theory relies far less on formal standardized or norm-referenced tests and much more on authentic measures. In tangible sense of the word, founded upon the authentic measures, assessment must be viewed from different perspectives and in context to provide a complete picture of students' abilities, efforts and process during the learning process. This questions the aptitude test in which the learners' motivational factors, their ambition and attempt, their strategies, styles, interests and preferences (Christison & Kennedy, 1999) are ignored.

Also, Gardner's lines of argumentation reads that dynamic and formative assessment over the course of ability development- rather than summative tests, such as intelligence tests or aptitude tests either for predictive or diagnostic purposes- are adhered to by virtue of the fitted kind of cultural variables (Armstrong, 2000), so that a variety of approaches are recommended to be applied in a variety of settings with use of culture-specific and capability fitting tools (Gardner, 1983). As regards the extension of aptitude test, Krashen (1982) states that explicit teaching affects aptitude rather than implicit one.

Alvis et al.'s (2004) explicit statement on MI assessment is that Gardner urges the use of assessment that is "intelligence-fair". Assessment that is intelligence-fair must be measured directly and not through the medium of another intelligence. This is diametrically opposed to IQ test, achievement tests, and *aptitude test* (the italics added). Some researchers (Alvis et al., 2004; Armstrong, 2000; Stanford, 2003; Lantolf & L.Thorne, 2006) elaborate on a variety of methods and instruments contextually pertinent to the plenty of abilities rather than just one ability limited to talent or aptitude. As their statements follow, the approaches include observation, students' interviews, checklists, work samples, anecdotal records, portfolios, videotapes, self-assessment, photography and translation.

On a concluding note, the fundamental philosophy here rests on the premise that the educators can be equipped with a good number of contextually multiple-ways to evaluate students (Stanford, 2003). Accordingly, MI theory and dynamic assessment (Lantolf & L.Thorne, 2006; Gardner, 1983) offers students frequent chances to be exposed to several contexts, and interacting variables (Robinson, 2005), but the multiplicity of contexts and ways of assessments must proceed along the line of learner's interest, so that the learner as potential test takers will be with ease guided and scaffolded. Thus, it sounds for certain that the core of dynamic assessment is opposed to the uniform view of formal and standardized testing associated with aptitude test and IQ test. Scholastic Aptitude Test, as with intelligence test, i.e., IQ, yields a single score; this score is, from our vantage point, defectively indicative of the ability of the test takers. Thus, this view is challenged if investigated from assessment within the framework of multiple-intelligences perspectives and socio-cultural theory.

3. Social consequences and validity of aptitude test with a view to Impact of culture on intelligence and aptitude

Some researchers, such as Vygotsky (1978), have abandoned the idea of a general intelligence and have searched for specific factors only. As he suggests, general view of intelligence is far removed from the complexity of mind. The mind is not a complex network of general abilities, but a set of specific capabilities, each of which is, to some extent, independent of the other. There is a shred of evidence that runs counter to this general view of intelligence. As the point

is argued by Mangal (2005), Anarchic theory or multi-faceted theory of intelligence considers intelligence to be a mixture of numerous separate elements or factors, each one being a minute element of one ability. There is no such thing as general intelligence.

Taken into close account, since the expansion of mind beyond brain, great importance has been attached to culture in approaching intelligence. As Carruthers and Chamberlain (2000) propose: "material culture plays as important role as that of language in extending the mind beyond the limits of the brain. Another piece of evidence is supplied by Armitage et al. (2003) in support of the movement of mind beyond brain. They claim that social and cultural factors have been regarded as more important components of intelligence than heredity. This is what has been also evidenced in the intelligence estimates of men and women about themselves, so that women in some cultures estimate their own intelligence lower than that of men's (Swami, Furnham & Zilkha, 2009).

In similar vein, Caruthers and chamberlain (2000) prioritize over culture and maintain that since the expansion of mind beyond brain, the considerable significance must be attached to environmental and cultural issues playing a striking role in actualizing the potential power included in intelligence. Similarly, the same claim is backed up by Armitage et al., (2003) and Gardner and Moran (2006) in support of the role of cultural and social factors in shaping the frame of intelligence. As a matter of fact, the precise nature of my ability is subject to a myriad of factors beyond the score the aptitude test can predict.

To vividly shed light on the matter, there lies a considerable advance on the idea of multi-dimensionality of mind and the various facets of cognition in his MI Model (Christison, 1998). As a matter of fact, the taken-for-granted implication underlying the MI model is that the uni-faceted view of intelligence based on the results of test score has been discarded, instead of which the pedagogically protected and benefited view of Intelligence has been developed (Alvis et al., 2004; Christison and Kennedy 1999; Gardner, 1991; Armstrong, 2003).

It get obvious from the thus far discussion that MI makes certain that intelligence must be nurtured and interpreted (Gardner, 1983; Goodnough, 2001; Haley, 2001; Furnham & Fukumoto, 2008) in the context so largely as to alleviate some of the obstacles we face on the part of heredity in the interpretation and application of intelligence. To clarify the point in as much detail as possible, Miller (2002) exercises elaboration on the contextual theory of intelligence containing the ability and capacity to deal with the issues in its social and cultural context; that is to say, to interpret and apply the potential capacity of intelligence in the pedagogical context, the performance of learners in various cultural settings must be taken account of.

The following contributes too much to our understanding of the changeability of abstract constructs of fixed aptitude and IQ: The first is the Sternberg's triarchic theory which deals with a range of intelligent behavior that goes beyond that measured by typical IQ test. According to which, intelligence is regarded from various perspectives rather than from one fixed and limited angle (Miller, 2002). The second is ecological approach which places an emphasis on the role of environment in shaping intelligence. According to which, environmental factors play the most leading role in changing and nurturing the intelligence of the learners (Mondi, 2005, p.144). The third is technology or multi-media which taps the resources to convey and provide information for each

dimension of intelligence (McCoog, 2010; Najjari, 1996; Armstrong, 2000).

In addition to the above-mentioned factors, Gardner (1983) has incorporated other research findings such as genetics, psychology, neurology, history, philosophy and anthropology into his multiple-intelligences theory, all indicating the effect of contextual elements on conventionally considered fixed abilities.

Gardner's (1983) original classic list included seven intelligences: 1. Interpersonal intelligence 2. Spatial Intelligence 3. Logical-mathematical intelligence 4. Verbal/linguistic intelligence 5. Bodily-kinesthetic intelligence 6. Intrapersonal intelligence 7. Musical Intelligence. In blunt words, Armstrong (2000) states that Gardner then added other three in his list: Naturalist intelligence, spiritual intelligence, and existential intelligence; the naturalistic intelligence was welcomed to pedagogy, but, as she seeks to stress, the nature of the last two intelligences is highly controversial. Let's elaborate on the first intelligence: This intelligence is concerned with the capacity to understand the intentions, motivations and desires of the people and to communicate with them (Gardner, 1983). Based on this profile of interpersonal intelligence, the argument is that some people have strong communicative ability which is associated with language use, i.e., this ability can contribute its fair share to the oral performance of the language testers and test takers. This given, the theory of language aptitude test is based on acquisition rather than use. As a consequence, the result and inference lies with you.

4. Conclusion

The results of the present study replicate and extend plenty of theoretical findings, as mentioned through the whole body of the present work, but is different from the previous findings in that teaching and testing are placed juxtaposed, each mutually exerting impact on each other generally and challenging traditional tests, i.e., aptitude test and IQ test, from multiple-intelligences perspectives in particular. This foregoing argument suggests that no single measurement instruments should be used (Thomas et al., 2008) for a construct (Messick, 1995). So, it is anticipated that multiple-intelligence based pedagogy for teaching and assessment and socio-cultural view of dynamic assessment which are infused within pedagogical agendas would yield an influential learning product and would motivate the learners' preferences, styles, interests, and preferences, since the theory leads to self-motivation and self-evaluation (Martin, 2003). This is based on the sound premise that no proliferate teaching without use of a variety of assessment tools is possible (Gipps, 1994).

In clear statements, this is evidence adduced against the predictive validity of aptitude test because no parallel is drawn between real-world situation and test situation (Palmer & Bachman, 2010). So, if the ultimate purpose of validity is test use (Bachman, 1995), language aptitude test without considering the whole picture related to contextual issues as well as the test-design relevant issues will include construct-irrelevant variances, such as bias (Zeidner, 1987), which leads to under-performance and ends in misrepresentation of their competence. On the second hand, some learners have strong profile of interpersonal intelligence (Gardner, 1983) and, from our view-point, with their effective communication can develop their performance and are also capable to boost their self-perceived strategies and change their implicit techniques to explicit ones: These all demand a pedagogical milieu and educational opportunities, all hence lending support to the drawbacks of language aptitude test.

It is certainly intriguing that much of what is interesting about MI is its close association with individualized learning and learner-centered education (Veenema & Gardner, 1996). Crucially, personalization of MI content and prioritization of experiential understanding of the theoretical underpinning of MI-triggered syllabus and education must be a prerequisite initiative taken ahead of other empirical movement (Armstrong, 2000). As Gardner (1983) argues, there are clear configurationally protected profiles for the personalization of MI on the part of teachers in the classroom. Thus, the sophisticated consideration of the total spectrum of abilities and realities appraisal of performances and experiences associated with each intelligence (Armstrong, 2000) must be regarded. In tandem with this statement, McMahon, Rose and Parks (2004) and Mokhtar, Majid, and Foo (2008) are on the status that the strategy-related abilities of the individuals and student-centric learning are central to MI.

Justified by the evidence amassed to date, the critical inference rests is that every learner is unique and every learner employs idiosyncratic strategies and styles, so that the teachers and testers can broaden the learners' horizon of the related language proficiency, preferences, interests, strategies, styles. Therefore, the consistent argument on the ground of our inference is that the historical concept of pure intelligence and aptitude both measured by a single IQ score is seriously flawed. Instead, intelligence and aptitude must be viewed in context and by the agency of socio-cultural variables.

On a final note, multiple-intelligences theory and socio-cultural perspectives are in support of pedagogy by advancing the notion of bridging the deep gap between the disabled and enabled learners as well as test takers by taking into constructive account the exploitation of highly developed intelligence in favor of less developed intelligence: Hence no fixed view of intelligence of whatever kind is considered. Likewise, as regards aptitude, instead of considering the ability to learn a foreign language constant, as is clear from language aptitude test, it should keep the doors open to the process-based assessment, i.e., formative assessment and dynamic assessment mediated by both tests takers and test givers, setting aside the economic aspect of the test associated with ease of administration.

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