

# Suitability of Instruction Methodology in Informative Management Course: An Empirical Study

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*Instructor's decision to choose a suitable instruction methodology depends upon the maturity level of learners. Literature reveals the use of andragogy or pedagogy as instruction methodology. Self-concept of learner, experience, learning motivation, orientation to learning and domain of instruction are identified as the factors of learner's maturity level. The current study focused on examining the relative effectiveness of andragogy and pedagogy in teaching higher level informative course to postgraduate management learners of an autonomous business school in Rajasthan. Effectiveness of learning is examined through measuring learning output. Analysis of results reveals relatively high maturity level of learners and therefore the preferred methodology of instruction shall be andragogy only. Instructors are suggested to use practical application through use of videos, experiential exercises, and group activities in which learners can share their experiences.*

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## **Instruction Methodology**

Optimum learning outcome requires a perfect matching of learners' learning style and instructor's instruction methodology (Beder & Darkenwald 1982, Brookefield 1984, Knowles 1984). The learning style of learners is reflected by the type and range of activities that learners undertake to acquire domain knowledge (Beder & Darkenwald 1982). Maturity of learner and familiarity with the domain of current learning influence the learning style of learner (Nadkarni 2003). Similarly, instruction methodology used by instructors can be either pedagogical or andragogical. The instructor's decision to use either pedagogical or andragogical methodology

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largely depends on the maturity level of learners and the familiarity of the learners with the domain. Instructors prefer to use pedagogical methodology when the learner's maturity level is low and the domain specific knowledge is negligible; whereas andragogical methodology is more preferred for highly matured learners and when the learner has more familiarity with the domain.

Nadkarni (2003) commented that 'future studies may examine the relative effectiveness of andragogy and pedagogy in teaching higher level courses to mature learners. Further, research in teaching higher level courses to mature learners mostly confined to either teaching general management or decisional tools such as strategic management, marketing management, organizational behaviour, accounting etc. (Govekar & Rishi 2007, Karns 2005, Nadkarni 2003, Bale & Dudney 2000). Research in examining the relative effectiveness of andragogy and pedagogy in teaching higher level informative courses to mature learners is very rare. Again, in India we haven't come across any empirical study related to the above said areas. This research gap has encouraged the researchers to pursue the current study.

The current study focused on identifying the most preferred instruction methodology for an informative course titled

'Changing Business Environment' (CBE) offered to a batch of postgraduate management learners of an autonomous business school in Rajasthan, India. For this purpose, data were collected from the learners to explore the preferred instruction methodology. Secondly, maturity level and domain awareness of the learners were ascertained to examine the dynamics of learners style of learning. Finally, effectiveness of learning is examined through measuring learning output. Opinion study of the learner was conducted to know how far the learning has been successful in realizing learners' objective.

### **Conceptualisation**

*Learning* is an activity that learners engage in to acquire particular skills and knowledge (Brookefield 1984). The type and range of activities that learners undertake to acquire domain knowledge reflects the learning style of learners (Beder & Darkenwald 1982). The learning style of learners is contingent on the domain of instruction and the maturity of learners (Nadkarni 2003). The basic premise of the adult learning literature is that the better the fit between the learning style of learner and the instructional methodology of instructor, the more favourable the learning outcomes resulting from the activity of learning (Beder & Darkenwald 1982, Brookefield 1984, Knowles 1984). With this background in mind, an attempt is made here to describe the three important components of a learning activity that is learner's maturity, instruction methodology and learning outcome.

### **Learner's Maturity**

Smith and Delahaye (1987) described learner's maturity as including the amount of knowledge the learner already has in the subject area, the level of interest and need to acquire the learning, the degree to which the learner is willing to accept the responsibility to learn, and the degree of skill in learning the learner possesses. Stuart and Holmes (1982) suggest that learner's maturity consists of the learner's past learning experiences, expectations, attitudes to the forthcoming learning event, and prior knowledge. Nadkarni (2006) observed that learner maturity consists of the learner's past learning experience, expectations, attitudes to the forthcoming learner event, and prior knowledge of the domain. On the basis of the above literature, we identified self-concept of learner, experience, learning motivation, orientation to learning and the amount of domain knowledge as the characteristics of learner's maturity.

### ***Self- Concept of the Learner***

Self-concept of the learner refers to self-directed learning. A self-directed learning is a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Knowles 1970). The self-concept of learners varies from a passive recipient of knowledge to self-directed and responsible learning. The

movement from dependency to self-directedness is, what Lieb (1991) considered as the resultant of 'the normal maturing process of life'.

### ***Experience***

Experience influences learner's learning style. As a person matures he accumulates a growing reservoir of experience that becomes an increasing resource for learning. As Marienau (1999) observed 'a hallmark of an educated person is the capacity to reflect on and learn from experience such that the learning yields meaningful interpretations of life occurrences and informs future action'.

### ***Motivation***

Learning motivation has been defined as the willingness to attend and learn material presented in a developmental program (Noe 1986). As a person matures his readiness to learn becomes oriented increasingly to the developmental tasks of his social roles. Learners are ready to learn those things they need to know in order to cope effectively with life situations.

### ***Orientation to Learning***

Learning preferences of the learner depends on goal orientation of the learner. As a learner matures, his time perspective changes from one of postponed application of knowledge to immediacy of application and accordingly his orientation towards learning shifts from subject-centred to problem centred. For example, an adult learner knows what they want before they enrol in the course,

because they know where they want to go. They appreciate a course that is well organized and has goals delineated clearly and preferably congruent with their own (Lieb 1991). They prefer learning that will help them perform tasks that they confront in their life situations.

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### *Domain Knowledge*

Learners' level of domain knowledge also acts as a determinant of learning maturity level. As Smith and Delahaye (1987) observed that the amount of knowledge the learner already has in the subject area affects the maturity level of the learner. The inherent contrast between different subjects such as pure versus applied, quantitative versus qualitative, or analytical versus perceptual suggests that more subtle differences may prevail across different disciplines such that the dynamics of teaching and learning may manifest themselves in characteristic ways (Nadkarni 2003). The results of studies evaluating the relation between instructional styles and learning outcomes in subjects such as mathematics and statistics that are quantitative, conceptual, and analytical may not be applicable to management domains such as organizational behaviour or strategic management that are qualitative,

perceptual, and practical in orientation (Nadkarni 2003). Marketing educators have also given considerably more emphasis to active (Wright, Bitner & Zeithamel 1994) and experiential learning activities (Gremler et al. 2000, Kennedy Lawton & Walker 2001, Smith & Van Doren 2004).

### *Andragogical & Pedagogical Methodologies*

Knowles (1984) identified two contrasting instructional styles in adult education: *andragogical and pedagogical*. Pedagogy is derived from the Greek words paid (child) and agogus (lead or accompany) while andragogy is derived from aner (adult) and agogus. Pedagogy involves adults leading or accompanying children while andragogy is characterized by adults leading adults (Bale & Dudney 2000). Pedagogical styles are more teacher-driven and directed methods, whereas andragogical methods are more learner-centered or self-directed styles (Nadkarni 2003). Knowles (1984) compares the assumptions of pedagogy and andragogy as follows:

1. The role of the child is that of a dependent learner; the adult, due to the maturation process, is a self-directed learner. Adults have a need to "take charge" of their learning and we as teachers should nurture this natural tendency.
2. Children have no experiences of worth that they can bring to the learning setting; adults, as they grow and mature, accumulate a wealth of experiences that can be a rich resource for learning.
3. Children are brought, or made to go,

to school when society deems it time; adults come to learn when they are compelled by the need to cope with a “life change” or to satisfy some other real-life circumstance.

4. Younger learners see learning as a matter of accumulating subject matter content that will be used when they are older; adults view learning as a means to improve their competency level, and they want to apply whatever new knowledge immediately.

Knowles argued that andragogical methods are universally more appropriate for adult education than pedagogical methods. This is because adult learners are more often the initiators of their own learning experience; they exert more control over learning processes and outcomes, and therefore prefer more power and autonomy in the learning context (Brim & Wheeler 1966). Unlike the practice of pedagogy, which is teacher-centered, andragogy is learner-centered, with the role of the teacher primarily that of a facilitator.

### **Learning Outcome**

Outcomes are the consequences of participating in a particular project, course,

or program, such as an academic degree program. Learning outcomes are the resultant of an interaction between the learning style of learners and the instructional methodology of instructor. The better the fit, the more favourable will be the learning outcomes. (Beder & Darkenwald 1982, Brookefield 1984, Knowles 1984).

Student-learning outcomes provide a means for clearly stating the expected outcomes of instruction, or more broadly, the expected outcomes of a program. Measuring learning outcome requires both qualitative and quantitative measures to be adopted by the instructor. Qualitative measures of learning outcome are better indicators of student learning than quantitative measures such as examination performance (Ramsden 1992, 2003). Student satisfaction, achievement, persistence, and retention have been used as qualitative measures (Beder & Carrea 1988, Charkins et al. 1985, Conti & Welborn 1986, Graham 1988), whereas quantitative measures like examination results, grades etc. have been used as a measure of learning outcome (Watkins & Hattie 1981, Entwistle & Ramsden 1983). A common set of learning outcomes that may be found in a business degree program is provided in Table 1.

**Table 1: Learning Outcomes Found in a Business Program**

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- Analytical and statistical skills (problem solving)
  - Communication skills (oral and/or written)
  - Content specific knowledge (e.g., financial theories, analysis, reporting, and markets) Critical thinking skills
  - Ethical understanding
  - Global awareness
  - Group and individual dynamics in organizations
  - Motivational and leadership skills
  - Multicultural and diversity understanding
  - Organizational skills
  - Use and management of information technology
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## **Learner Maturity & Instruction Methodology**

Stuart and Homes (1982) argue that learner maturity is an important consideration in selecting appropriate style of instruction. In other words, selection of instruction methodology (i.e. andragogy or pedagogy) to teach an informative input to post graduate management learners will depend on learners' level of maturity. The self-concept of learners varies between the andragogical and pedagogical methods. The pedagogical method assumes learners prefer to play the role of passive recipient of knowledge. On the other hand, the andragogical method assumes that learners prefer to be self directed and educators have the responsibility to encourage and nurture the transformation from dependency to self-directedness (Knowles 1970).

The importance of experience also differs between andragogical and pedagogical methods. In the pedagogical method, learners are assumed to have limited experience to assist in learning. In contrast, andragogy assumes learners have many experiences that assist in the learning process ( Knowles 1970). Pedagogy concentrates not on learning from experience, but instead on instituting an experience base (Forrest & Peterson 2006). While, andragogical teachers assume learners have experiences, use of such experiential knowledge is necessary for the education process to be effective (Forrest & Peterson 2006).

Assumptions made on learner's motivations or readiness to learn, help defining the differences between the two

learning models. When describing readiness to learn, Knowles (1970) discusses "teachable moments". Pedagogy assumes that learners tend to experience uniform teachable moments; therefore, standard curricula combined with external motivations are considered appropriate. According to Knowles teachable moments for adults are not uniform. Andragogy implies that a curriculum must be flexible enough to capture teachable moments, with adjustment for changing needs. Furthermore internal factors tend to be more motivational for adults. Under pedagogy, learners assume that chosen course topics will help them to acquire skills that will be relevant and useful in the future. Under andragogy, learners tend to seek immediate relevance in education. Any knowledge gained tends to be quickly applied to the lives of adult learners; therefore, an andragogical curriculum focuses on competency development that is immediately relevant to adult learners.

## **Domain & Learning Output**

Instructor's choice of instructional methodology depends on domain as well. As Nadkarni (2003) observed "the inherent contrast between different subjects such as pure versus applied, quantitative versus qualitative, or analytical versus perceptual suggests that more subtle differences may prevail across different disciplines such that the dynamics of teaching and learning may manifest themselves in characteristic ways". For example, in lower level introductory courses, the instructor's primary function is to build strong conceptual understand-

ing in the learners. A pedagogical method of instruction giving more thrust to concept building through lecture based method seems more appropriate for such kind of courses.

A myriad of studies have shown that instructional context strongly influences learning outcomes such as student satisfaction, achievement, persistence, and retention (Beder & Carrea 1988, Charkins et al. 1985, Conti & Welborn 1986, Graham 1988). Attempting to link instructional methodology, domain and learning output, Miglietti and Strange (1988) commented that 'the importance of disciplinary differences in assessing the outcomes of teaching styles always mediated through learning styles'. Empirical studies in learning also concluded that 'the relation between instructional methodology and learning outcomes in subjects such as mathematics and statistics that are quantitative, conceptual, and analytical may not be applicable to management domains such as organizational behavior or strategic management that are qualitative, perceptual, and practical in orientation' (Nadkarni 2003). Marketing educators have also given considerably more emphasis to active (Wright, Bitner & Zeithamel 1994) and experiential learning activities (Gremler et al. 2000, Kennedy, Lawton & Walker 2001, Smith & Van Doren 2004).

On the basis of the above discussion, we propose the following hypotheses for the study:

Null Hypothesis 1. There is no significant difference between andragogy

and pedagogy (instruction methodology) for informative inputs for Post Graduate (PG) management learners. The above hypothesis leads to the following sub hypothesis:

Null Hypothesis 1a. There is no significant difference between andragogy and pedagogy (instruction methodology) with respect to self concept for informative inputs for PG management learners.

Null Hypothesis 1.b. There is no significant difference between andragogy and pedagogy. (instruction methodology) with respect to experience for informative inputs for PG management learners.

Null Hypothesis 1.c. There is no significant difference between andragogy and pedagogy ( instruction methodology ) with respect to motivation/readiness to learn for informative inputs for PG management learners.

Null Hypothesis 1.d. There is no significant difference between andragogy and pedagogy (instruction methodology) with respect to orientation to learning for informative inputs for PG management learners.

Null Hypothesis 2. Learning outcome for the informative inputs for PG management learners is not very high.

### **Methodology of the Study**

Primary and secondary data were used for this research. Primary data is collected from an autonomous Business School in Rajasthan, which is exclusively

for women. A questionnaire was administered on MBA part I learners in spring semester. Total strength in MBA part I was 114 learners of whom 95.6% submitted satisfactory responses.

### Measures

The survey instrument included items that assessed *Preferred Learning Style* (24 items) and *Learning Outcome* (5 items). To measure Preferred Learning Style, we used Student's Orientation Questionnaire (SOQ) used by Bale & Dudney (2000). The SOQ was a modification of an earlier questionnaire developed by Hadley (1975). Hadley's (1975) questionnaire contained 25 andragogical and 25 pedagogical items (Deveci 2007). The modified SOQ used by Bale & Dudney (2000) has 41 statements, with 20 being andragogical and 21 being pedagogical. We further modified SOQ for our research and confined the number of questions into 24 statements, 12 being andragogical and 12 being pedagogical. The statements were scored on a 5-point Likert scale ranging from 5 (*almost always*) to 1 (*almost never*). Cronbach's alpha test is conducted to test the reliability of data and its value is found .63 (Table 2). *Learning Outcome* is measured through an instrument containing five items: course coverage, course relevance, instruction methodology used, evaluation system used and learning from the course. Respondents were asked to share their satisfaction through a 5-point Likert scale ranging from 5 (*excellent*) to 1 (*very poor*).

**Table 2: Reliability Test**

Cronbach's alpha	.63
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### Statistical Analysis

For the purpose of analysis of data, descriptive analysis, paired sample T test analysis and one sample T test analysis were used on a standardized data set using SPSS version 11.0 and MS Excel. Tables 3- 6 show means, standard deviations, paired sample T test analysis and one sample T test analysis. Paired sample T test analysis was done to investigate the significant difference between andragogy and pedagogy (instruction methodology), and significant difference between andragogy and pedagogy (instruction methodology) with respect to self-concept, experience, motivation and orientation to learning for informative inputs for PG management learners. One sample T test was done to measure the learning output. Paired sample T test is analyzed to investigate the significant difference between andragogy and pedagogy (instruction methodology). The paired sample T test analysis indicates that for the 114 subjects, the mean score on the andragogy methodology of instruction ( $M=3.97$ ) was significantly greater at the  $p<.05$  level (note:  $p=.000$ ) than the mean score on the pedagogy methodology of instruction ( $M=3.44$ ). With this the null hypothesis 1, that is, 'there is no significant difference between andragogy and pedagogy for CBE course' is rejected. This implies that the preferred instruction methodology is andragogy for CBE course. In other words, the instructor may use more experiential learning based methodology than lecture and discussion based methodology for teaching CBE to the learners.

**The preferred instruction methodology is andragogy for CBE course.**

**Table 3: Paired Sample Statistics between Pedagogy and Andragogy**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pedagogy	3.4495	109	.55254	.05292
	Andragogy	3.9725	109	.51745	.04956

**Table 4: Paired Samples Test between Pedagogy and Andragogy**

		Paired Differences				t	df	Sig.	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair 1	Pedagogy - Andragogy	-.5229	.68848	.06594	Lower	Upper	-7.930	108	.000
					-.6536	-.3922			

**Table 5 : Paired Samples Statistics among Learners Maturity level across Pedagogy - Andragogy**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	And Self Concept	3.9174	109	.81795	.07835
	Ped Self Concept	3.4862	109	.93902	.08994
Pair 2	And Experience	3.7064	109	.71106	.06811
	Ped Experience	3.5229	109	.80042	.07667
Pair 3	And Motivation	3.7798	109	.69865	.06692
	Ped Motivation	3.7615	109	.76859	.07362
Pair 4	And Orientation	4.1284	109	.70843	.06786
	Ped Orientation	3.0459	109	.79798	.07643

Paired sample T test is conducted to investigate the significant difference between andragogy and pedagogy (instruction methodology) with respect to self-concept, experience, motivation and orientation to learning. The paired sample T test analysis indicates that the mean score on the andragogy methodology of instruction with respect to self-concept (M=3.91) was significantly greater at the p<.05 level (p=.000) than the mean score on the pedagogy methodology (M=3.48), the mean score on the andragogy methodology of

instruction with respect to experience (M=3.70) was significantly greater at the p<.05 level (p=.047) than the mean score on the pedagogy methodology (M=3.52), the mean score on the andragogy methodology of instruction with respect to motivation (M=3.77) was insignificant at the p<.05 level (p=.000) than the mean score on the pedagogy (M=3.76), and andragogy methodology of instruction with respect to orientation to learning (M=4.12) was significantly greater at the p<.05 level (p=.000) than the pedagogy methodology

**Table 6: Paired Samples Test among Learners Maturity level across Pedagogy - Andragogy**

		Paired Differences				t	df	Sig.
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower		Upper		
Pair-1	And Self Concept Ped Self Concept	.4312	1.18139	.11316	.2069	.6555	3.811	108 .000
Pair-2	And Self Concept Ped Self Concept	.4312	1.18139	.11316	.2069	.6555	3.811	108 .000
Pair-3	And Experience Ped Experience	.1835	1.04673	.10026	.0152	.3822	1.830	108 .047
Pair-4	And Readiness Ped Readiness	.0183	1.00905	.09665	-.1732	.2099	.190	108 .850
Pair-5	And Motivation Ped Motivation	1.0826	1.12323	.10759	.8693	1.2958	10.062	108 .000

(M=3.04). With this the null hypothesis 1.a., 1.b., and 1.d. are rejected, where as the null hypothesis 1.c. is accepted. This means that the learners are self directed, they bring practical experience and knowledge to the educational activity and are problem or performance centred. It

is also proved that learners are not motivated by internal factors such as need to learn. Rather, they seem to be more motivated by external factors such as grade, placement etc.

In Table 7, one sample T test is con-

**Table 7: Learning Output-One Sample Test**

		Test Value= 3			t	df	Sig.	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower		Upper		
Var	Learning Output	4.25	.124	.055	1.10	1.41	22.59	108 .000

ducted to investigate the significant difference between Instruction methodology (andragogy/ pedagogy), Maturity level (high/low) and Learning output for informative inputs for PG Management learners. The result of the analysis indicates that the mean satisfaction of the class ( $M=4.25$ ) was significantly higher at the  $p<.05$  level ( $p=.000$ ) than the instructor's goal (satisfaction level) of 3 from a five point scale. With this the null hypothesis 2. i.e. 'Learning outcome for the informative inputs for PG Management learners are not very high' is rejected. This means that if the instructor use andragogy methodology of instruction the learning output will be very high.

### **Discussion**

The results of the study proved that andragogy is the most suitable method of instruction for teaching an informative course to post graduate management learners. The results support the traditional view on adult education that self-directed, experiential instructional methods are most suitable for adult learners (Brookefield 1984, Knowles 1984).

**The results of the study proved that andragogy is the most suitable method of instruction for teaching an informative course to post graduate management learners.**

The suitability of andragogy for the given population is primarily based on the maturity level of the learners. The results of the study indicates that the maturity level of the learners pursuing a post-

graduate management course is relatively high for three learners maturity dimensions i.e. self -concept, experience, and orientation to learning except motivation. The high maturity level across self-concept, experience, and orientation to learning is because of the deliberately chosen career through rigorous admission tests. When learners intentionally chose the career of management and therefore admitted in to a management programme from a self funded autonomus B school (where the fees is relatively higher than govt. funded B' Schools), the learners are expected to be self-directed. The finding that the learners bring practical experience and knowledge to the educational activity is quite surprising considering the low level of experience of the learners. However, perhaps earlier exposure to such informative courses, particularly at the graduation level might have helped the learners to bring more experience to the class The finding that learner's orientation to learning is high, is quite natural and expected because learners of a professional programme are expected to be problem or performance centred. However, the results do not agree with the assumption that learners' maturity with reference to motivation is very high. The result proved that learners are not motivated by internal factors such as need to learn. Rather, they seem to be more motivated by external factors such as grade, rigid structure etc. Again, the result is quite surprising. May be this is because the population of the study is females only. In Indian culture, the society considers the marriageable age of average females as 22-24. By the end of a PG management programme, the stu-

dents are expected to be very close to the said age level. This might have lowered the internal motivation of the learners resulting in more concern for external motivation like grades or final result.

**The result proved that learners are not motivated by internal factors such as need to learn. Rather, they seem to be more motivated by external factors such as grade, rigid structure etc.**

### Limitations

First limitation is that the sample unit consists of one unit only (A deemed university) where as the sample size is only 114 learners of a PG department of an autonomous B school. The findings may not be generalised across all learning environments. Secondly, the scope of the study confines only to a single subject (Changing Business Environment) under informative course headings. Covering more subjects related to the informative course area may increase the variance and therefore the results can be more valid. Finally, the measurement of Learning Output may cover quantitative measures like GPA scores etc.

### Conclusion

Management education is more qualitative than quantitative. For a given problem, there may be a variety of solutions based on assumptions. So, instructors have to create understanding among the learners for different real situations rather than information dump. Therefore

we suggest the instructor to use practical application through use of videos, experiential exercises, and group activities in which learners can share their experiences in groups in every class for informative domain as well. The methodology can be emphasized more by using simulation and role-playing activities and by encouraging learners to share personal experiences. Long and comprehensive case discussions can be used frequently with minimal intrusion from the instructor. The findings further encourage free communication through group activities such as class simulation and role playing where the instructor adopted a laissez-faire approach.

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