

Teaching Style vs. Gender: Which Shapes Students' Self-Concept More?

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Abstract: The formal education system, constrained by age, space, and attendance requirements, has failed to achieve the Millennium Development Goal of "Education for All" by 2015 in a country with a literacy rate of 66% (NSS Report 2004-2005). Open and Distance Learning (ODL) offers a crucial alternative to reach marginalized learners. While formal education operates through structured institutions, distance education involves spatial/temporal separation in teaching with entry qualifications, and open learning provides flexible access with compulsory teacher-learner interaction. Self-concept, encompassing dimensions like self-confidence, academic status, social popularity, and emotional well-being, significantly influences learning outcomes. However, most existing studies on self-concept focus on formal education, and research on ODL has largely addressed administrative aspects. This study compares the self-concept of secondary students in formal schools and Rabindra Mukta Vidyalaya, West Bengal's state open school. It examines differences based on gender and mode of instruction, and tests for interaction effects between them. The findings aim to inform policies for improving learner support in both systems.

Key words : Formal Education, Open and Distance Learning, Self-Concept, Gender Differences, Mode of Instruction

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The formal education system, bound by rigid requirements of age limits, fixed locations, and mandatory attendance, has not been able to fulfill the Millennium Development Goal of "Education for All" by 2015 in India, where the literacy rate was recorded at 66% according to the NSS Report 2004-2005. Given these limitations, the Open and Distance Learning (ODL) system emerges as a critical alternative. It provides flexible access to education for learners who are excluded by the structural barriers of conventional schooling, thereby playing a vital role in expanding educational opportunities.

Distance education refers to a mode of learning in which teaching and learning are separated by space and/or time, and a major part of the instruction is delivered without direct face-to-face contact. It operates as a component of the broader Open and Distance Learning system, but unlike fully open systems, it imposes certain eligibility and qualification requirements for admission. While facilities for interaction between teachers and learners are available, such interaction is not mandatory and largely depends on the learner's choice.

Open Learning is an educational approach designed to provide access to learning opportunities for all individuals, irrespective of their background, location, or time of study. It removes traditional barriers such as age, prior qualifications, and fixed schedules. Unlike distance education, open learning emphasizes flexibility while ensuring that teacher-learner interaction is an essential and mandatory component of the learning process.

Formal education, on the other hand, refers to a structured and institutionalized system of learning with clearly defined objectives. It is designed for specific age groups and is delivered through organized schools, colleges, and universities that are established and regulated by society. This

system operates under set rules, curriculum, and administration, and is managed by trained educators and authorities to ensure standardized learning outcomes.

Self concept: Self concept refers to what people come to know about themselves through experience reflection feedback from others.

Some of the sub dimensions of self concept are:

- **Self confidence:** It refers to the belief in one's personal worth and likelihood of succeeding.
- **Physical self concept:** - It refers to the belief of the individual about his own physique and physical ability and what others think about the same.
- **Intellectual and school status:-**It refers to one's belief about the worthiness of his intellectual ability and where does actually he stands in his school i.e. his status in the school group.
- **Anxiety and Emotion:** - It refers to the individual's self concept about the incidents of which he or she feels anxious and emotional.
- **Happiness and Satisfaction:** - It refers to the individuals self concept about the incidents of which he or she feels happy and satisfied.
- **Social self concept and Popularity:** - It refers to the individuals belief about how much popular or socially desirable.
- **Self Worthiness:** - It refers to the individual feeling how worthy he or she is to others.
- **Job Related Self-Concept:-** It refers to the individual's idea about his or her satisfactory job and environment.
- **Belief and Conviction:** - It refers to the individuals concept about his belief and conviction

Reddy (1994) made a study on the learners attitude of Distance education. Singh, Bakhshish (1993) studied the functioning of Open University and 29 correspondence course institutes. Mishra (1991) studied the management patterns, costs and academic effectiveness of Distance Education in Indian universities Sahoo (1985) studied the correspondence education in an Indian University. Saxena (2000), conducted a study to draw profile of distance learners at IGNOU.

However, all the studies dealt with either the administrative aspect or learner profile of distance education.

While most self-concept theorists continued to write and conduct research during the 1970's and 1980's, general interest in self-concept declined. Fortunately, there is a new awareness on the part of both the public and professionals that self-concept cannot be ignored if we are to successfully address such nagging problems as drug and alcohol abuse, drop-out rates, dysfunctional families, and other concerns. In addition to this growing awareness, new ways are being developed to strengthen self-concepts. For example, researches by cognitive theorists (McAdam, 1986; Ryan, Short & Weed, 1986) are demonstrating that negative self-talk leads to irrational thinking regarding oneself and the world.

Chisthty (1992) found Boys and girls differ significantly. Boys mean self-concept was higher than that of the girls. It was found that self-concept also affected the learning behavior of the children which predict their learning outcomes.

Marsh, Herbert W. (1993) found that the components of academic self-concept are more differentiated (i.e., less correlated) than the achievement scores and that relation between academic self-concept and academic achievement is more content specific than has been previously assumed. Efklides, Anastasia and Petkaki, Chrysoula (2005) investigated the relation of induced mood with mathematical ability and self concept in mathematics as well as the effect of induced mood on mathematic performance and metacognitive experiences.

Bornholt, I. J. and Piccolo, A (2006) found common and diverse pathways to children's participation in physical activities that have important application in education and clinical programme for children's health and wellbeing.

Bano Shabana and Mishra, R.C (2005) found the group and social category to which an individual belongs play an important role in the development of self concept and perception of other in intergrowth comparison situation.

Studies related to self concept were conducted by Chisthty (1992) Marsh, Herbert W. (1993) Efklides, Anastasia and Petkaki, Chrysoula (2005) Bornholt, I. J. and Piccolo, A (2006) Bano Shabana and Mishra, R.C (2005) Marsh, Herbert W. (1993) all dealt with students in the formal mode.

Rabindra Mukta Bidyalaya is the state open school set up in 1997 and named so in 1998. According to West Bengal Council for Higher Secondary Education the pass outs of this institute are eligible for admission in to affiliated schools and colleges in West Bengal. In spite of this glory the achievement of these learners is usually looked down on account of its low quality for some reason or the other. So these two parallel forms of Secondary Education have been taken for comparison.

OBJECTIVES:

The objective of this study is to assess and compare the self concept of the students in the formal and open mode of education.

To find out whether there is a difference in students due to gender and mode of education with respect to their self concept.

To find is there any interaction effect of gender and mode of instruction on students' self concept.

DELIMITATION:

The sample of the research was limited within secondary level.

The study has been limited only to three variables, namely, Distance mode, Formal mode, self concept, gender.

METHODOLOGY:

Variables: The independent variable of the study is mode of instruction and the dependent variable is self concept of the students.

Sample: 400 students from the secondary education level were selected of which 200 were from distance mode and 200 were from formal mode of education, of which 121 were boys and 279 were girls.

Table 1: Distribution of Sample

	Distance Mode	Formal Mode	Total
Boys	66	55	121
Girls	134	145	279
Total	200	200	400

Tools:

- 1) *Personal information sheet*
- 2) *Self Concept Inventory:* Constructed by researcher

Self Concept Inventory

Initially 192 items were selected and distributed to 3 experts for their rating. On the basis of expert rating 70 items for measuring the Self Concept were selected.

It is a likert type (5 points scale) having Reliability 0.792 (Cronbach Alpha method) Inter dimension correlation was also calculated using Pearson correlation method. All the dimensions were found to be significantly correlated with each other and all dimensions have significant correlation with the total self concept score at 0.01 level.

The content validity of the test was determined from the Judgment of 3 experts. Inter rater agreement as the basis for content validity was also calculated and found to be 0.74 which is significant.

Hypothesis:

Ho1: There is no significant difference between the students from distant mode and formal system in respect of their total self concept.

Ho2: There is no significant difference between the students from distant mode and formal system in respect of the sub-dimensions of self concept, viz,

- a. Self Confidence
- b. Intellectual and Social Status
- c. Physical Self Concept
- d. Anxiety and Emotion
- e. Happiness and Satisfaction
- f. Social Self Concept and Popularity
- g. Self Worthiness
- h. Job Related Self Concept
- i. Belief and Convictions

Ho3: There is no significant difference between the boys and girls with respect to their total self concept.

Ho4. There is no significant difference between the boys and girls with respect to the sub-dimensions of self concept, viz,

- a. Self Confidence
- b. Intellectual and Social Status
- c. Physical Self Concept
- d. Anxiety and Emotion
- e. Happiness and Satisfaction
- f. Social Self Concept and Popularity
- g. Self Worthiness
- h. Job Related Self Concept
- i. Belief and Convictions

Ho5. There is no significant interaction effect of gender and mode on students' total self concept

Ho6. There is no significant interaction effect of mode of instruction and gender on the sub-dimensions of students' self concept

- a. Self Confidence
- b. Intellectual and Social Status

- c. Physical Self Concept
- d. Anxiety and Emotion
- e. Happiness and Satisfaction
- f. Social Self Concept and Popularity
- g. Self Worthiness
- h. Job Related Self Concept
- i. Belief and Convictions

Analysis: Table 2: Descriptive Statistics according to Mode of Instruction

	Formal mode (200)		Distance mode (200)	
	Mean	SD	Mean	SD
SCI (total)	240.47	26.649	234.92	21.083
SCI 1(Self confidence)	30.75	5.463	30.38	4.501
SCI 2(intellectual and School status)	26.65	4.448	25.42	3.327
SCI 3(Physical self Concept)	33.62	6.006	32.88	5.374
SCI 4(anxiety and Emotion)	22.92	6.566	22.88	5.750
SCI 5(Happiness and satisfaction)	23.64	4.688	23.05	4.048
SCI 6(Social self Concept)	32.85	6.182	31.49	5.587
SCI 7(self Worthiness)	25.33	4.320	25.21	3.803
SCI 8(Job related self concept)	24.42	4.533	23.27	4.445
SCI 9(belief and conviction)	20.75	3.464	20.27	3.358

Table 3: Descriptive Statistics according to Gender of students.

	Boys(121)		Girls(279)	
	Mean	SD	Mean	SD
SCI (total)	239.12	25.922	237.07	23.373
SCI 1(Self confidence)	31.06	5.494	30.35	4.768
SCI 2(intellectual and School status)	26.21	4.082	25.96	3.926
SCI 3(Physical self Concept)	32.95	5.892	33.38	5.626
SCI 4(anxiety and Emotion)	23.28	5.629	22.73	6.384
SCI 5(Happiness and satisfaction)	23.10	4.906	23.45	4.143
SCI 6(Social self Concept)	31.92	6.153	32.28	5.830
SCI 7(self Worthiness)	25.15	4.273	25.32	3.978
SCI 8(Job related self concept)	24.29	5.110	23.65	4.235
SCI 9(belief and conviction)	21.17	3.692	20.22	3.253

For the purpose of quantitative data analysis ANOVA has been computed to find whether there is any significant difference between the students of formal and distance mode regarding their self concept or not and also to see the effect of gender difference on students' self concept.

Table 4: ANOVA of total self concept

Dependent Variable: Total Self Concept

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	5352.309	1	5352.309	9.346	.002	0.01
SEX	155.057	1	155.057	.271	.603	NS
SEX * MODE	573.268	1	573.268	1.001	.318	NS

From table 4 it can be said, There is significant difference between the students from distant mode and formal system in respect of their total self concept so Ho1 is rejected.

There is no significant difference between the boys and girls in respect of their total self concept, so Ho3 is accepted.

There is no significant interaction effect of gender and mode of instruction on students' total self concept, so Ho5 is accepted.

Table 5: ANOVA of sub dimension of self concept (SCI- 1)

Dependent Variable: self confidence (SCI- 1)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	39.973	1	39.973	1.611	.005	0.01
SEX	20.553	1	20.553	.828	.363	NS
SEX*MODE	6.342	1	6.342	.256	.613	NS

a. R squared = 0.026(Adjusted R Squared = 0.008)

From Table 5 it can be said, there is no significant difference between the students from distant mode and formal system in respect of their self confidence so Ho2a is accepted.

There is no significant difference between boys and girls in respect of the sub dimensions of self concept, i.e. Self Confidence, so Ho4a is accepted.

There is no significant interaction effect of mode of instruction and gender in respect of the sub dimensions of self concept, i.e. intellectual and school status , so Ho6a is accepted.

Table 6: ANOVA of sub dimension of self concept (SCI- 2)

Dependent Variable: Intellectual and School Status (SCI- 2)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	179.521	1	179.521	11.635	.001	0.01
SEX	1.107	1	1.107	.072	.789	NS
SEX * MODE	17.064	1	17.064	1.106	.294	NS

a. R Squared = .038 (Adjusted R Squared = .021)

From Table 6 it can be said,

There is significant difference between the students from distant mode and formal system in respect of intellectual and school status. So Ho2b is rejected.

There is no significant difference between boys and girls in respect of the sub dimensions of self concept, i.e. intellectual and school status, so Ho4b is accepted.

There is no significant interaction effect of mode of instruction and gender in respect of the sub dimensions of self concept, i.e. intellectual and school status , so Ho6b is accepted.

Table 7: ANOVA of sub dimension of self concept (SCI- 3)

Dependent Variable: Physical Self Concept (SCI- 3)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	151.873	1	151.873	4.781	.059	NS
SEX	29.484	1	29.484	.928	.336	NS
SEX*MODE	23.625	1	23.625	.744	.389	NS

a. R Squared = .041 (Adjusted R Squared = .024)

From Table 7 it can be said, there is no significant difference between the students from distant mode and formal system in respect of their physical self concept, so Ho2c is accepted.

There is no significant difference between boys and girls in respect of the sub-dimensions of self concept, i.e. physical self concept, so Ho4c is accepted.

There is no significant interaction effect of mode of instruction and gender in respect of the sub-dimensions of self concept, i.e. physical self concept, so Ho6c is accepted.

Table 8: ANOVA of sub dimension of self concept (SCI- 4)

Dependent Variable: Anxiety and Emotion (SCI- 4)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	.041	1	.041	.001	.974	NS
SEX	66.085	1	66.085	1.741	.188	NS
SEX * MODE	.222	1	.222	.006	.939	NS

a. R Squared = .019 (Adjusted R Squared = .001)

From Table 8 it can be said, there is no significant difference between the students from distant mode and formal system in respect of their Anxiety and Emotion, so Ho2d is accepted

There is no significant difference between boys and girls in respect of the sub-dimensions of self concept, i.e. Anxiety and Emotion, so Ho4d is accepted

There is no significant interaction effect of mode of instruction and gender in respect of the sub-dimensions of self concept, i.e. Anxiety and Emotion , so Ho6d is accepted.

Table 9: ANOVA of sub dimension of self concept (SCI- 5)

Dependent Variable: Happiness and Satisfaction (SCI- 5)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	37.914	1	37.914	1.977	.160	NS
SEX	15.449	1	15.449	.806	.370	NS
SEX * MODE	.574	1	.574	.030	.863	NS

a. R Squared = .020 (Adjusted R Squared = .003)

From Table 9 it can be said, there is no significant difference between the students from distant mode and formal system in respect of their happiness and satisfaction, so Ho2e is accepted.

There is no significant difference between the boys and girls in respect of the sub-dimensions of self concept, i.e. happiness and satisfaction, so Ho4e is accepted.

There is no significant interaction effect of mode of instruction and gender in respect of the sub-dimensions of self concept, i.e. happiness and satisfaction, so Ho6e is accepted.

Table 10: ANOVA of sub dimension of self concept (SCI- 6)

Dependent Variable: Social self concept and popularity (SCI- 6)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	284.033	1	284.033	8.199	.004	0.05
SEX	23.547	1	23.547	.680	.410	NS
SEX*MODE	17.325	1	17.325	.500	.480	NS

a. R Squared = .030 (Adjusted R Squared = .013)

From Table 10 it can be said, there is significant difference between the students from distant mode and formal system in respect of their social self concept and popularity, so Ho2f is rejected.

There is no significant difference between boys and girls in respect of social self concept and popularity, so Ho4f is accepted

There is no significant interaction effect of gender and mode of instruction in respect of social self concept and popularity, so Ho6f is accepted.

Table 11: ANOVA of sub dimension of self concept (SCI- 7)

Dependent Variable: self worthiness (SCI- 7)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	6.561	1	6.561	.392	.531	NS
SEX	5.518	1	5.518	.330	.566	NS
SEX * MODE	2.977	1	2.977	.178	.673	NS

a. R Squared = .006 (Adjusted R Squared = .012)

From Table 11 it can be said, there is no significant difference between the students from distant mode and formal system in respect of their self worthiness, so Ho2g is accepted.

There is no significant difference between boys and girls in respect of self worthiness, so Ho4g is accepted.

There is no significant interaction effect of mode of instruction and gender in respect of self worthiness, so Ho6g is accepted.

Table 12: ANOVA of sub dimension of self concept (SCI- 8)

Dependent Variable: Job related self concept (SCI- 8)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	227.625	1	227.625	11.522	.001	0.01
SEX	43.609	1	43.609	2.207	.138	NS
SEX * MODE	35.755	1	35.755	1.810	.179	NS

a. R Squared = .050 (Adjusted R Squared = .033)

From Table 12 it can be said,

There is significant difference between the students from distant mode and formal system in respect of their job related self concept, so Ho2h is rejected.

There is no significant difference between boys and girls in respect of job related self concept, so Ho4h is accepted.

There is no significant interaction effect of mode and gender in respect of job related self concept, so Ho6h is accepted.

Table 13: ANOVA of sub dimension of self concept (SCI- 9)

Dependent Variable: Belief and conviction (SCI- 9)

Source	Sum of Squares	df	Mean Square	F	Sig.	P
MODE	13.666	1	13.666	1.186	.277	NS
SEX	67.023	1	67.023	5.815	.016	0.05
SEX*MODE	4.784	1	4.784	.415	.520	NS

From Table 13 it can be said, there is no significant difference between students from distant mode and formal system in respect of belief and conviction, so Ho2i is accepted.

There is significant difference between boys and girls in respect of belief and conviction so Ho4i is rejected

There is no significant interaction effect of mode and gender in respect of belief and conviction, so Ho6i is accepted.

Table showing t-value and mean difference where main effects were significant in ANOVA.

Fields of differences	Between	Mean	t-value	df	Sig.	P
Total Self Concept	Formal	240.47	2.294	398	0.022	0.05
	Open	234.92				
Intellectual and School Status	Formal	26.65	3.105	398	0.002	0.01
	Open	25.42				
Social self concept and popularity	Formal	32.85	2.274	398	0.024	0.05
	Open	31.49				
Job related self concept	Formal	24.42	2.613	398	0.009	0.01
	Open	23.27				
Belief and Convictions	Boys	21.17	2.577	398	0.011	0.05
	Girls	20.22				

Major findings of the research:

In case of total self concept, and the sub-dimensions of self concept viz., intellectual and school status, job related self concept, social self concept and popularity the students of formal mode scored higher than the students of distance mode.

In case of the sub-dimensions of self concept viz., self confidence, physical self concept, anxiety and emotion, happiness and satisfaction, self worthiness, belief and convictions there is no significant difference between the two groups of students.

There is a significant difference between boys and girls in their belief and convictions.

Significance:

The open distance learning (ODL) may modify its self instructional material according to the needs of the learners in order to raise their self concept.

The students may be given more openings for participating in seminar presentation and competitive exams to broaden and change people's outlook for ODL system.

For the vocational courses there can be scope of campus interview to assure the job security to increase their job related self concept.

Limitations:

While selecting the sample the schools under NOS were not included only the State Open School was taken.

The sample does not have equal number of boys and girls

Scope for Further Studies:

A study can also be conducted to find the causes of distant students' low self concept in comparison to formal education students.

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