Andragogy and pedagogy working together in shifting balance: An Evaluative Study of the Teaching-Learning Process in Samtse College of Education (SCE)

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Abstract

This artcle informs about andragogy and pedagogy working together in shifting balance at SCE: the perceptions of students and lecturers on these methods of teaching-learning process, shifting balance of teaching styles of lecturers taking place in between these two methods, how students are learning in such shifting balance and preference of the students among these two methods. The same sets of self-administered survey questionnaire were executed by both the students and lecturers, classroom teachings scenarios of lecturers at variuos seniority levels were observed and interviews were conducted with these lecturers and two senior students. Data collected from the survey questionnaire were analyzed using MS Excel. The interviews data were analysed using the process of emerging themes. The data from observations were used to to see if the information collected from survey questionnaires and interviews were valid. Study found out that most respondents were aware that both methods co-existed depending upon nature of the subject matters being dealt with, shifting balance of teaching between these methods in SCE was confirmed, students were found preferred andragogy more than the lecturers and most of the modules need to be taught by applying both methods. Study recommends that a module on andragogy could be offered in SCE. The lecturers of SCE may be trained in shifting balance between andragogy and pedagogy. The lecturers of SCE should apply more andragogical approaches in SCE.

Keywords: *Andragogy; pedagogy; perceptions;shifting balance; co-existed*

Teaching is a noble profession. It is done applying various teaching skills and teaching strategies in accordance to the nature of the subject matters, age level and background of the students, availability of the teaching-learning facilities and the context in local and global perspectives. More in general, teaching approaches can be categorized into two broad categories termed as andragogy and pedagogy.

Seventeen years of teaching experiences as a teacher and a teacher educator provided the researcher with an insight of making distinction in teaching methods. The shift of his teaching environment from schools to that in the teacher education colleges has given him a vivid perception of the difference in teaching strategies in various levels of learners. He perceived andragogy and pedagogy are blended together and applied in a lesson (Nicholas and O'Brien, 2008) in such way that the lesson often shifts back and front between andragogy and pedagogy.

This study was done in order to see the perceptions of lecturers and students of SCE about andragogy and pedagogy and how lecturers are applying these methods in their teaching approaches: if the shifting balance in their teaching approaches was taking place between andragogy and pedagogy and which one (andragogy or pedagogy) they are applying more, which modules need to be taught applying more andragogy. The study was also done in order to see how students are learning and towards which (andragogy or pedagogy) students were more interested.

The researcher feels that it is high time in Bhutan to practice the adult teaching approach to teach specially the college students. The self-directed learning appears "more in tune with our natural process of psychological development" (Knowles, 1968, p.14) has been realized and felt that andragogy is necessary in Bhutanese colleges and universities.

So the reason for this study was to investigate/learn about the perspectives and preference of lecturers and students regarding the andragogy and pedagogy, learn about the shifting balance between these methods in teaching and examine the possibility of recommending andragogy in SCE. The researcher also perceived that in Bhutanese colleges and universities, it has been highly needed to apply the four postulates of Knowle`s theory (as stated by Thomas (2008)) that adults need to be involved in the planning and evaluation of their instruction (Self-concept and Motivation to learn); experience (including mistakes) provides the basis for learning activities (Experience); adults are most interested in learning subjects that have immediate relevance to their job or personal life (Readiness to learn) and adult learning is problem-centered rather than content-oriented (orientation to learning). These postulates obviously help college and university students own the ownership of learning through independent and freedom of learning.

Lecturers of SCE are applying the blended of andragogy and pedagogy, but would not know to distinguish them and deal accordingly. This article informs and enable the lecturers of colleges and universities to make a clear distinction between these methods, so that they would apply in their lessons accordingly. In an andragogical lesson there is less lecturing, demonstrating and monitoring task of tutor in comparison to that in pedagogical lesson. It is because, andragogy is focused more in independent study of students whereby tutor`s manual workload gets reduced. However, it is equally not so easy to prepare such lesson plans. A tutor has to be really versatile and champion in conducting an andragogical lesson. In andragogical lesson plans, a tutor has to invest more inputs. Eventually, students also will have to learn in more of learning by doing approaches.

This motivates lecturers to apply more of andragogical lesson in their teaching styles. If the lecturers apply more of andragogical styles of teaching then this will lead students to become more independent learners. Students becoming more independent learners means they are realizing the importance of ownership of learning. Students realizing the ownership of learning indicates an improvement in quality of education.

In 1833 the concept of andragogy was invented in the West and it was flourished worldwide by Malcolm Knowles in 1968. Still in Bhutan it is not so much popular. However, it is very much useful for adult teachings. Therefore, this articles educates lecturers and students of colleges and universities towards striving for quality education. This study has discovered that limited no.of researches has been done in adult teaching-learning approaches, but no one has so far done research in shifting balance of teaching between andragogy and pedagogy. So there is still a high scope for researchers to fill this gap. These findings also have implications for educators involved in designing online learning applications and will be used to develop a prototype of individualized online learning environment based on the pedagogy and andragogy.

Literature Review

The word "andragogy" was first coined in 1833 by Alexander Kapp (1800–1869), a German teacher (Loeng, 2017). In Greek, 'andra' means 'grown-up man' and 'andragogy' means 'man-leading' whereas 'peda' mean 'child' and 'pedagogy' means 'child-leading. Knowles (1968) stated, `andragogy is the art and science of helping adults learn whereas pedagogy is the art and science to teach children in a teacher-directed approach`.

According to Savicevic (1981) (as cited in (Knowle, 1968)), several European countries, such as Hungary, Poland and Yugoslavia also had used the term prior to 1968. Hungarian educators place teaching and learning within an overall system called "anthropogogy". This system is subdivided into andragogy (concerned with adult education) and pedagogy (dealing with youth education). This gave the researcher an insight on distinction between teaching methods to different levels of students.

Hiemstra & Sisco (1990) clearly specified that in a pedagogical model a teacher has full responsibility for making decisions about: what will be learned, how it will be learned, when it will be learned, and if the material has been learned. They also sketched an outline of the development of andragogy in the field of education: andragogy as a system of ideas, concepts and approaches to adult learning was first introduced to adult educators in the United States by Knowles in 1968.

Mezirow (1994) stated "Educators should actively assist those already going through transformations in learning and may participate transformative learning as well". Lecturers have vital role to guide the college students in helping them learn the in-depth knowledge, skills and wisdoms, thereby enabling them become independent learners. This became another motivational factors for the researcher to arouse a sense of curiosity to study about the shifting balance between andragogy and pedagogy.

Corner (2008) (as cited in (Knowle, 1968)), added that the five didactic principles be observed by a teacher before applying an andragogical approach to formal learning: (1) learners must know why something is important to learn,(2) learners must be shown how to direct themselves through seeking and gaining information, (3) topics must be related to the learners' experiences, (4) people will not learn until they are ready and motivated to learn, and (5) teachers must help learners overcome inhibitions, behaviors and beliefs about learning.

Andragogy is a learner centered method to teach adults. It is mostly applicable in tertiary level of education: colleges and universities. Pedagogy is a teacher centered method. It is mostly applied in schools: Primary to Higher Secondary. Shifting balance means maintaining the balance of application of andragogy and pedagogy in teaching-learning process. More generally, a blend of these methods (Nicholas and O'Brien, 2008) is applied at tertiary level of education. The teaching styles of lecturers in colleges and universities shifts from andragogy to pedagogy and vice versa, balancing their application. So that teaching can be done effectively.

A similar type of study in Malaysia informs that a blend of andragogy and pedagogy (Nicholas and O'Brien, 2008) is practiced in higher institutions in Malaysia. Norah et al. (2012), claims that andragogical and pedagogical assumptions should be utilized in moder-

ation based on the student preference. Some student preferred learning based on the pedagogical principles orientation while the others do not. Majority of the undergraduate students are found preferred a combination of pedagogical and andragogical orientation on their learning process. Undergraduate students are able to work independently since their self-concept has progressed to the self-directed learning practice. Norah et al. (2012) `s findings also do not highlight exactly how the shifting balance takes place between these methods in higher institutions in Malaysia.

Above mentioned literature inform that in USA, Malaysia and many European countries, there is a clear distinction of teaching methods whereas in Bhutan so far the system of following a distinction in teaching methods has not been established. According to Gyamtsho and Maxwell (2013), the teaching methods practiced in the five colleges of Royal Universities of Bhutan (RUB) has been stated in two approaches: teacher centred and learner centred. When we say teacher centred, it normally focuses on pedagogy (teacher directed) and the "learner centred" is not exactly an andragogy. So the findings of Gyamtsho and Maxwell do not highlight a clear distinction between andragogy and pedagogy, and the shifting balance of teaching styles of lecturers in the colleges of RUB. Whatever methods applied in Bhutanese schools and institutes are simply called as pedagogy. In fact, andragogy is an approach to teach the intrinsic values of subject to the adult learners through teachers` motivation and inspiration. If this is done properly then the students will realize the ownership of learning. The present study is informed by the above literature and observations.

Research question and objectives
The study attempted to answer the following main question: How is the shifting balance taking place between andragogy and pedagogy in SCE?

The following sub-questions were the set to address the above question:
a) What are the perspectives of lecturers and students regarding andragogy and pedagogy?
b) What are the benefits of andragogy?
c) How does the shifting balance between andragogy and pedagogy take place in SCE?
d) Which is preferred: andragogy or pedagogy?

Research Method
Since it was an evaluative study on teaching –learning process in SCE, a mixed method comprised of survey questionnaires (with quantitative and qualitative items), observation of classroom teachings and interviews was employed. Survey questionnaires and interviews provide in-depth understanding on perceptions and preferences of the respondents. So these two tools were used to collect information from the respondents on their perceptions about andragogy and pedagogy and to see their preferences among these in teaching-learning in SCE. Triangulation in the process of analysing data gives a clear picture on an evaluative study. It confirms the information provided by the respondents which helps researchers analyse and get the correct findings. Therefore, observations on classroom teaching scenarios were done which not only informed about how the lecturers used these methods in lessons, but also informed about how the students were learning.

Samples: Students

The data collected through survey questionnaires were quantitative and less qualitative items. So in order obtain a suitable sample size, the Taro Yamane (1967) (cited in Samdrup, 2013) was used as shown below:

Taro Yamane`s formula: $\quad n = \dfrac{N}{1 + N * e^2}$

Where:

n= number of samples of students / lecturers,

N= total number of students/ lecturers and

e = standard error of not more than 0.05 confidence level.

Calculation of students' sample size: N= 961 (Annual Report, 2014); e = 0.05.

$n = \dfrac{N}{1 + N * e^2} = \dfrac{961}{1 + 961 * (0.05)^2} = 282$ i.e. 29.34% of the total number of students.

The actual number of students (N=148) participated in survey questionnaires falls short by 47.52 % from the intended sample size (N=282). The reason was that, during the time of data collection, 300(Three hundred) Bachelor of Education (B.Ed.) students were on teaching practicum in schools. This is a normal practice in SCE that every year about 300 B.Ed. students are placed in different schools in Bhutan on their teaching practicum for six months. Besides, the first year B.Ed. students are not included in this study since they were newly admitted and it was assumed that they would not know the system of the college. However, students` sample being homogeneous, a small sample size would have been enough to represent the entire student population of the college for this study. So a stratified sampling of the study population was of students from the second, third, fourth year B.Ed, and Post graduate Diploma in Education (PgDE) who were present in the college.

Correlation coefficient denoted by `r` is a numerical value used to measure the degree of a statistical relationship between two variables. For example, variables in this study are the means of the parameters: perception, preference, shifting balance and benefits in context to andragogy and pedagogy and their application in teaching-learning process in SCE. In order to see the relationship between the mean of students and that of lecturers in measuring the perception on andragogy and pedagogy working together in shifting balance at SCE, Pearson`s correlation formula (as shown below) was used to calculate the correlation coefficient `r`.

$$ r = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[N\Sigma x^2 - (\Sigma x)^2][N\Sigma y^2 - (\Sigma y)^2]}} $$

Where:

N	=	number of pairs of scores
Σxy	=	sum of the products of paired scores
Σx	=	sum of x scores
Σy	=	sum of y scores
Σx^2	=	sum of squared x scores
Σy^2	=	sum of squared y scores

Σ= symbol for summation. Nearer the value of `r` to 1, stronger the relationship between the two means.

Samples: Lecturers.
The lecturers' sample size was calculated to be 38 of the total 42 lecturers (Annual Report, 2014). Calculation of students 'sample size: N= 42; e = 0.05

$$n = \frac{N}{1 + N * e^2} = \frac{42}{1 + 42 * (0.05)^2} = 38 \text{ i.e } 90.47 \text{ \% of the total number of lecturers.}$$

The actual number of lecturers respondent was 27 i.e. 62.28% of the total lecturers. The variation in teaching styles and the effectiveness in teaching of lecturers differ significantly with respect to their seniority in teaching experience. So a stratified sample size of the lecturers comprising representative from three different categories: Senior, moderately senior and junior lecturers was chosen.

Data collection and analysis procedures

Quantitative data collection and analysis
Before executing the survey questionnaire, participants were briefed on the meaning, definition and distinction of the terms 'andragogy' and 'pedagogy'. Such details were also given in the very first section of the survey questionnaire. Equipped thus with enough background regarding 'andragogy' and 'pedagogy', the participants took part in this study even though 'andragogy' was new term to them.

This study did not require gender difference of the respondents. The samples was homogenous. Twenty three items were used in the survey questionnaires. The data collected in each item was measured using the Likert-type rating scales in five different levels of agreement:
Strongly Disagree (SD) =1; Disagree (D) =2; Slightly Agree (SLA) =3; Agree (A) =4 and Strongly. To determine the overall ratings, the interval mean mid-scores was calculated, based on the number of interval levels each Likert-type scales were composed of, by using the folowing equation:

$$Interval = \frac{Highest \text{ level score - lowest level score}}{Number \text{ of levels}}$$

For example, following denotations for mean scores and the abbreviations have been applied in all the tables of scores of agreement level for easy interpretation of data:
Mean scores:
1.00 - 1.80= strongly disagree (SD)
1.81 - 2.60 = disagree (D)
2.61 - 3.40= slightly agree (SLA)
3.41 - 4.20 = agree (A)
4.21 - 5.00= strongly agree (SA).

sd =standard deviation; m = mean; OA-level= overall agreement level

The data were analysed using MS Excel 2007. To obtain a quantitative measure of respondents` perception, above mentioned Likert-type rating scales was used in the questionnaire. These rating scales were used as the basis for calculating the mean scores (m) and standard deviation (sd) of the various statements. Referring to Briggs cited in (Soley-

Bor, 2013), the number of missing data from each variable has been removed from the data analysis. The observed sample size has been used in computation of the required statistical parameters: mean and standard deviation.

Qualitative data collection and analysis

The participants took part in this study even though the term 'andragogy' was new to them. Ten lecturers participated in observations and interviews: The classroom teachings (each teaching period being of one hour duration) of three senior most, six moderate senior and one junior lecturers were observed. Semi-structure interviews were conducted with these lecturers immediately after the observation of their classroom teachings. Two senior students participated in interviews. In order to shed more light on the data collected, the audio/video of semi-structured interviews conducted with two lecturers and the two senior students have been recorded.

The coding of qualitative data gathered from the interviews, qualitative items in the survey questionnaires and the audio/video recordings were analysed for emerging themes in the perspectives of andragogy and pedagogy working together in shifting balance

Data presentation and findings

This article presents the data and finding in the following sequence based on the mean and standard deviation scores:

First, it presents the quantitative data and findings from the survey questionnaires: perceptions of students on andragogy and pedagogy, shifting balance of teaching style of lecturers between these methods and the benefits of application of andragogy, followed by students` preference among these two methods. Second, in the same way, it presents the quantitative data and findings from the lecturers` information. Third, it reports on overall mean scores, discussion, conclusion and recommendation from this study on quantitative data analysis. Fourth, it presents the qualitative data and the findings, conclusions and recommendations from observations of classroom teachings scenarios of lecturers and the interviews.

Data presentation and findings from survey questionnaire

Perception of students on pedagogy and andragogy at SCE(Table 1)

Based on the mean and standard scores ,the three most agreeable statements : in pedagogical approach, motivation to learn is through external pressure such as parents, teachers, competition for grades & fear of failing in exams where as in andragogical approach it is intrinsic (m=4.14, sd=4.51) ; andragogy provides scopes of becoming more independent learner (m=4.12, sd=4.53) and shifting from pedagogy to andragogy helps students become more responsible citizen (m=4.02,sd=4.23) showed that the means are quite high and close to each other than that of the other six statements in the table 1. On other hand, the standard deviations of these statements are quite low but almost equal to the means.

This indicates that quite high no.of students agree with these statements showing less variation in their perceptions on these methods of teaching (andragogy and pedagogy).

Table 1: Scores of agreement level on the perception of students on andragogy and pedagogy (N=148)

Sl#	Statement	m	sd	OA-level
1	The ownership of learning is more in andragogy than in pedagogy.	3.93	4.04	A
2	The backbone of pedagogy is transmission techniques where as that of andragogy is transformational.	3.91	4.19	A
3	In pedagogical approach, motivation to learn is through external pressure such as parents, teachers, competition for grades & fear of failing in exams whereas in andragogical approach it is intrinsic.	4.14	4.52	A
4	In pedagogical approach it's the instructor's responsibility to cover all the content of the curriculum where as in andragogical approach the instructor is a facilitator or resource person.	3.97	4.24	A
5	Shifting from pedagogy to andragogy helps students become more responsible citizen.	4.02	4.23	A
6	Andragogy helps learners realize why they are learning something where as pedagogy doesn`t.	3.60	3.70	A
7	Students of SCE are adults and tend to be self-directing.	3.70	3.81	A
8	Andragogy provides scopes for becoming more independent learner.	4.12	4.52	A

Similarly the least agreeable statements: andragogy helps learners realize why they are learning something whereas pedagogy doesn't (m=3.6, sd=3.70) and the students of SCE are adults and tend to be self-directing (m=3.7, sd=3.81) are quite close to their respective means in comparison to that of the other six statements. Standard deviations being close to the means, it is quite small.

This indicates that quite a high no. of students agree with these statements showing less variation in their perceptions on andragogy and pedagogy.

The overall agreement levels indicated that all the statements were at the agree (A) level: mean score 3.41 - 4.20 where most of the perceptions were close to 4.20. There are no strong agreements; neither is there any disagreement.

Therefore, an assumption can be made that there is less variation in these perceptions of the respondents whereas the variation in other six perceptions were quite high.

Students` perception on the shifting balance between pedagogy and andragogy (Table 2)
Except the statement (the least agreeable): most of the time tutor`s lesson is moving from andragogy to pedagogy (m=2.92, sd=4.04, SLA) other three statements are within agree (A) level within the range of mean score 3.6 to 3.73. There are no strong agreements; neither is there any disagreement on this statement.

This indicates that there is very high variation in the perceptions of students on the shifting balance between andragogy and pedagogy (shown in all four statements). However, except the least agreed statement, other three indicates that most students think shifting balance is taking place from pedagogy to andragogy. It can be assumed that there is less variation in this perception.

Table 2: Students` perception level on the shifting balance between pedagogy and andragogy (N=148)

Sl#	Statement	m	sd	OA-level
1	Most of the time tutor`s lesson is moving from pedagogy to andragogy.	3.73	4.14	A
2	Most of the time tutor`s lesson is moving from andragogy to pedagogy.	2.92	4.04	SLA
3	I want the shift of teaching method from pedagogy to andragogy.	3.60	4.02	A
4	I need more of andragogical lesson.	3.71	4.03	A

Students` perception on benefits of andragogy (Table 3).
Based on the mean scores, the study has indicated that all the statements given in the following table 3 are at agree (A) level within the range of mean scores 3.41 - 4.20. There are no strong agreements; neither is there any disagreement.

The sd of all the statements were very high ranging from 4.28 to 4.75 except the statement: andragogy reduces the teaching workload of tutors (m=3.8, sd=3.97). This indicated that the no.of students agreeing this statement is very high with this statement but there is a less variation in the perception of students even though the overall agreement level was agree (A).

Table 3: Scores of Students` perception level on how beneficial andragogy is for them (N=148)

Sl#	Statement	m	sd	OA - level
1	Andragogy reduces teaching workload.	3.86	3.97	A
2	Andragogy helps me become more reflective.	3.96	4.52	A
3	Andragogy helps me become more independent.	3.94	4.75	A
4	Andragogy helps me become more resourceful.	4.04	4.64	A
5	Andragogy provides me with unlimited learning scopes.	3.97	4.28	A

Students` preference (Table 4)
Based on the mean and sd scores the most agreeable statements presented are: I prefer andragogy to be applied by tutors (m=3.73,sd=3.92) and I prefer andragogy because it helps me become self-directed (m=3.69,sd=4.08). The least agreeable statement was: I prefer pedagogy to be applied by tutors in SCE (m=2.95, sd=3.67). There are no strong agreements; neither is there any disagreement. Among the four statements, the second statement with (m=3.69, sd=4.08) had the highest variation in the preference of the respondents. The overall agreement level of all the statements also indicated that the variation in the preference of respondents was quite high. Thus an assumption can be made that there is a very high variation in this perception of students.

Table 4: Scores of students` preference level on teaching Method: pedagogy or andragogy (N=148)

Sl#	Statement	m	sd	OA-level
1	I prefer pedagogy to be applied by tutors in SCE.	2.95	3.67	SLA
2	I prefer andragogy to be applied by tutors in SCE.	3.73	3.92	A
3	I prefer pedagogy as it helps cover syllabus easily.	3.11	3.81	SLA
4	I prefer andragogy because it helps me to become self-directed.	3.69	4.08	A

Perception of lecturers on pedagogy and andragogy at SCE (Table 5)

Based on the mean and sd scores the most agreeable statement was: the ownership of learning is more in andragogy than in pedagogy (m=3.93, sd=9.27) whereas the least agreeable was: Andragogy helps the learners realize why they are learning something where as pedagogy doesn`t (m= 3.07, sd=9.72, SLA). However, rest all statements were in overall agreement level `agree (A) ` within the mean score range of 3.56 to 3.85. There are no strong agreements; neither is there any disagreement. The sd in all the statements are very high ranging from 9.27 to 12.63(table 5).

This indicated that a large no.of lecturers agree with these statements, but there is a very high variation in the perceptions. (See the Table 5 in the following)

Table 5: Scores of lecturers' perception level on andragogy and pedagogy at SCE (N=27).

Sl#	Statement	m	sd	OA-level
1	The ownership of learning is more in andragogy than in pedagogy.	3.93	9.27	A
2	The backbone of pedagogy is transmission techniques where as that of andragogy is transformational.	3.85	12.63	A
3	In pedagogical approach motivation to learn is through external pressure such as parents, teachers, competition for grades & fear of failing in examinations where as in andragogical approach it is intrinsic.	3.59	10.34	A
4	In pedagogical approach it's the instructor's responsibility to cover all the content of the curriculum where as in andragogical approach the instructor is a facilitator or a resource person.	3.67	11.36	A
5	Shifting from pedagogy to andragogy help the student-teachers become more responsible citizen.	3.78	10.95	A
6	Andragogy helps the learners realize why they are learning something where as pedagogy doesn`t.	3.07	9.72	SLA
7	Students of SCE are adults and tend to be self-directing.	3.56	10.47	A
8	Andragogy provides scopes of becoming more independent learner.	3.78	9.60	A

Lecturers' perception on the shifting balance between pedagogy and andragogy (Table 6)

Based on the mean scores of perceptions of lecturers, slightly agreeable statement (Table 6) indicated was : most of the time my lesson is moving from andragogy to pedagogy (m=2.85,sd=11.35) , and the rest all statements were in overall agreement level `agree (A)` in the mean score range of 3.44 to 3.77. There are no strong agreements; neither is there any disagreement. The sd in all statements are very high ranging from 10.36 to 11.35.

Thus an assumption can be made that the variation in the perception of lecturers on the shifting balances between andragogy and pedagogy was very high.

Table 6: Scores of students` perception level on the shifting balance between andragogy and pedagogy (N=27)

Sl#	Statement	m	sd	OA-level
1	Most of the time my lesson moves from pedagogy to andragogy.	3.44	11.35	A
2	Most of the time my lesson is moving from andragogy to pedagogy.	2.85	10.42	SLA
3	I want to shift my teaching method from pedagogy to andragogy.	3.77	10.36	A
4	Students of SCE need more of andragogical lesson.	3.56	10.45	A

Lecturers' perception on the benefits of andragogy (Table 7).

Based on the mean and sd scores, the study has shown that all the statements were at agree (A) level within the range of mean scores 3.41 - 4.20 (Table 8). However the only statement with SLA was: Andragogy reduces the teaching workload of tutors (m=3, sd=10.10, SLA), but still its sd is very high. There are no strong agreements; neither is there any disagreement. The sd inn all the statements were found to be very high ranging from 10.104 to 15.27.

Thus an assumption can be made that the variation in the perception of lecturers on the benefits of andragogy is very high.

Table 7: Scores of lecturers' perception on benefits of andragogy (N=27)

Sl#	Statement	m	sd	OA-level
1	Andragogy reduces the teaching workload of tutors.	3.00	10.10	SLA
2	Andragogy helps students become more reflective	3.89	14.11	A
3	Andragogy helps students become more independent	4.00	15.27	A
4	Andragogy helps students become more resourceful.	3.89	14.12	A
5	Andragogy provides the learners with unlimited learning scopes.	4.00	11.61	A

Lecturers' preference (Table 8)
Based on the mean and sd scores indicated that the only agreeable statements presented was: I prefer andragogy because it helps students become self-directed (m=3.93, sd=10.70), rest all statements were at slightly agree level (table 8).

However, the mean score of all the statements is ranging from 3.04 to 3.93(very high) and the sd is from 9.71 to 10.88 (very high). Both the statements: I prefer pedagogy to teach in SCE (m=3.6, sd=9.71) and I prefer andragogy to teach in SCE (m=3.26, sd= 10.55) indicated equal preference (based on the equal mean) of the lecturers, but the variation (sd) of their perception is higher in the second statement.

Thus an assumption can be made that there was a very high variation in the prefer-ence of lecturers on their preference. (See the Table 8 in the following)

Table 8: Scores of lecturers' preference level on teaching method: andragogy or pedagogy (N=27)

Sl#	Statement	m	sd	OA-level
1	I prefer pedagogy to teach in SCE.	3.26	9.71	SLA
2	I prefer andragogy to teach in SCE.	3.26	10.55	SLA
3	I prefer pedagogy as it helps cover syllabus easily.	3.04	10.88	SLA
4	I prefer andragogy because it helps the students become self-directed.	3.93	10.70	A

Overall mean scores
Among all the 23 statements measured, the highest mean score (Table 9) was recorded on the statement: Most of the modules at SCE need to be taught by applying both andragogy and pedagogy equally (m= 4.24, sd= 4.46), agreeable perception of students. Same statement had an agreeable perception of in the statement (m=4.22 and sd=11.031) of lecturers. It was followed by the statement: In pedagogical approach, motivation to learn is through external pressure such as parents, teachers, competition for grades & fear of failing in exams where as in andragogical approach it is intrinsic (m=4.14,sd=4.52), agreeable perception by students.

The least agreeable mean score was on the statement: Most of the time my lesson is moving from andragogy to pedagogy (m=2.85, sd=10.424), agreeable perception by the lecturers followed by the statement,: Most of the time tutor`s lesson is moving from andragogy to pedagogy (m=2.92, sd=4.043) agreeable perception by students. This indicated that the lower mean score is close to 4 and upper mean score is greater than 4.

Table 9: Highest and lowest mean scores on the overall perception and preference (Students=148, lecturers=27)

Rank by levels of mean score	Perceptions	m	sd
1	Most of the modules at SCE need to be taught by applying both andragogy and pedagogy equally (students).	4.24	4.46
2	Most of the modules at SCE need to be taught by applying both andragogy and pedagogy equally (lecturers).	4.22	11.03
3	In pedagogical approach, motivation to learn is through external pressure such as parents, teachers, competition for grades & fear of failing in exams whereas in andragogical approach it is intrinsic.	4.14	4.52
	17 other statements		
21	Most of the time my lesson is moving from andragogy to pedagogy.	2.85	10.42
22	Most of the time tutor`s lesson is moving from andragogy to pedagogy.	2.92	4.04
23	I prefer pedagogy to be applied by tutors in SCE.	2.95	3.67

Discussion

According to Mezirow(1994), a proper guidance to the adult learners who are in transformation stage will lead them to transform themselves into an independent learners thereby enabling them realize the importance of ownership of learning.

The correlation coefficient ($r = 0.2600$) calculated using Pearson`s correlation formula, of the overall means of perceptions of students and lecturers indicated that they knew at least something about the concept and practice of andragogy and pedagogy at SCE: Lecturers were found agreeing slightly with the statement: andragogy helps the learners realize why they are learning something where as pedagogy doesn`t (m=3.07, sd=9.72, SLA, Table 5), rest all statements were at agree (A) level. It can be assumed that pedagogy also can make learners realize why they are learning something. However the overall agreement: Most of the modules at SCE need to be taught by applying both andragogy and pedagogy equally (students) (m=4.24, sd=4.46, Table 14) indicates that both (andragogy and pedagogy) need to be applied equally in SCE.

The overall agree level of students` perception as well as that of lecturers on the shifting balance between pedagogy and andragogy was found to be agree (A) with only one statement: Most of the time tutor`s lesson is moving from andragogy to pedagogy (m=2.92 , sd=4.04,Table 9), at slightly agree (SLA) level. It means, an assumption can be made that both the groups of respondents have a slightly agreeable perception such that

there is a shift from andragogy to pedagogy in the teaching styles of lecturers. On other statement: Most of the time tutor`s lesson moves from pedagogy to andragogy (m=3.73, sd=4.14), indicates that shift from pedagogy to andragogy in the teaching styles of lecturers is not so much since the variation (sd) in their perceptions is very high even though there is no significant difference between the mean scores of both the groups of respondents.

The correlation coefficient (r = 0.10904) of perceptions of both the students and lecturers on shifting balance between andragogy and pedagogy and vice versa is positive (not so high). It means both groups have the same perceptions that there is a shifting balance of teaching style between these two methods.

Following findings indicate that both the groups are in agree level (A) in the Overall Agree Level with a slight difference in the means. However, the variation in perceptions among lecturers is very high: Students (Table 3): I need more of andragogical lesson (m=3.71, sd=4.03, A) and Lecturers (Table 6): Students of SCE need more of andragogical lesson (m=3.56, sd=10.45, A). This indicates that students (m=3.71) are more positive to shifting from pedagogy to andragogy in the teaching styles of lecturers (m=3.56) at SCE.

The correlation coefficient r = 0.7611 (of the degree of relationship) was the highest among all the correlation coefficients in the perceptions of both students and lecturers on benefits of andragogy. This indicated that andragogy is extremely beneficial to both students and lecturers in SCE.

Study also indicated that the perceptions of students are more agreeable than that of lecturers on the benefits of andragogy. The overall level of agreement of perceptions of the students is agree (A) except the statement: Andragogy reduces the teaching workload of tutors (m=3.86, sd=3.97, Table 9), was agreed slightly by the lecturers. It indicated that students were more positively accepting the statement whereas lecturers (m=3, sd=10.10, SLA, Table 7) accepted only slightly. According to Knowle`s theory of adult learning, stated by Thomas (2008) ,andragogy helps students become independent , reflective and resourceful, but this significant variation in the means and sd of students and lecturers could be due to huge difference in their sample size: Students(N=148) and lecturers (N=27).

However the correlation coefficient (r = 0.7611) of the two independent means scores of these groups of respondents indicated that the degree of relationship in their perceptions on the shifting balance between andragogy and pedagogy was found to be extremely high. It means an assumption can be made that there was lots of benefits of andragogy to students and lecturers of SCE. It was found that both groups prefer andragogy over pedagogy as per the correlation (r = 0.2415) of the mean scores of their preference. However the further study of the statement: I prefer andragogy to be applied in SCE, the scores of students (m=3.73, sd=3.92, A, Table 4) and the scores of lecturers (m=3.26, 9.71, SLA, Table 8) indicated that the students prefer andragogy more than the lecturers do. However, the overall agreement level for the preference of andragogy and pedagogy has been seen just a slightly agreeable (SLA) indicating that both groups do not have very strong preference to either even though they have quite good positive correlation.

RUB applies two approaches in teaching: teacher centred and learner centred (Gyamtsho and Maxwell (2013)), in Malaysia a blend of andragogy and pedagogy (Nicholas, S. and O'Brien, T. 2008) is practiced in higher institutions in Malaysia (Norah et al. 2012)

and this study indicates SCE has the shifting balance of teaching styles of lecturers in between andragogy and pedagogy.

Conclusion and recommendation from the Quantitative Data Analysis
The overall perception of the respondents indicated that the students and lecturers knew at least something about the existence of andragogy and pedagogy in the teaching-learning process at SCE. Students were found to prefer andragogy to be applied in SCE. Study also indicated that there were lots of benefits of andragogy for both students and the lecturers. So a module on andragogy could be recommended to be offered in SCE.

Even though the existence of both andragogy and pedagogy in the teaching-learning process in SCE has been understood, the co-existence of these two teaching methods embeded in a lesson was not realized by the respondents. Therefore, an assumption can be assumed that there is co-existence between andragogy and pedagogy in SCE, but due to the high variation in the perceptions of students, the shifting balance between andragogy and pedagogy in the teaching styles of lecturers could not be confirmed.

Therefore, in general, both andragogy and pedagogy are blended in application in a lesson (Nicholas and O'Brien, 2008) has been indicated in the perceptions of the respondents. So the lecturers of SCE may be trained in shifting balance between andragogy and pedagogy.

Since the mean score (m=3.93) for both the respondent groups was same for the statement: the ownership of learning is more in andragogy than in pedagogy, an assumption can be made that andragogy should be given more importance in SCE. The study indicated that there is a shifting balance between andragogy and pedagogy in SCE.

Qualitative Data Presentation and Findings
The data and findings from observations are presented in the sequence senior, moderate senior and junior lecturers. Similarly a summary interpretation of the findings from observations has been presented in the same sequential manner. The data and findings from interviews are presented in the sequence of the three questions asked (mentioned in th interview section of this article) Conclusion and recommendation mention the findings of these qualitative data analysis.

Observations of Lecturers` class room teachings
Observations confirm the information provided by the respondents in the survey questionnaires and interviews. So it was intended to observe classroom teaching scenarios of ten lecturers in order to get the information for triangulation process of analysis. It was not intended to interview only ten lecturers, but during the time of data collection only these ten lecturers were available for interview.Three senior, six moderate senior and one junior lecturers were observed to study how they applied andragogy and pedagogy in their classes of teaching period for one hour each. Following are the results of this study.

Senior lecturers` classroom teaching
The three senior lecturers` classroom teaching styles were more of andragogical. Either the students knew some background of the lesson beforehand or they had high level of maturity of understanding the situation. Their lesson topics were: Role of Language in community and cultural difference, Human values and Techniques to Write Expository Essay respetively.

The andragogy seen in these observations were: role play, simulation and dramatization under teacher`s direction, the interview approach without teacher`s direction, student`s discussion in small groups on their own within a prescribed time, lecture cum demonstration, asking open ended questions such as "How to construct an idea of role play?, can you think of one best actor and actress to show off here?, analyse the story and note down the themes shown in the story such as cultural themes etc.". In one of the lessons, a small group test was conducted. One lecturer taught how to map three concepts by the triangulation approach. The lesson content was quite appropriate for andragogy. For assessment, the lecturers asked few open ended questions spread over the class.

The pedagogy seen in these observations comprised: use of ICT, prompting, additional information input, it bits/anecdote, lecture cum demonstration, questioning techniques and the use of local language familiar and easy for students to understand the concept.

Moderate senior lecturers` classroom teaching
Six moderate senior lecturers` classroom teaching styles were seen to be mostly traditional such as recapitulation, making connections, introducing the current lesson topic, lecturing cum demonstration, students hands- o n- practice under the teachers` guidance and sometimes without the teacher`s guidance. The subjects taught by them were Physics, Mathematics, Geography, Socio-dramatic Play and Life Skills. The Science and Mathematics lesson were completely content based using lecture cum demonstration.

The andragogy seen in these lessons were: identification of a hummed tune, discussion of the given materials, independent thinking, open discussion and reaching a solution, presenting the solution on charts, students' asking questions and the teacher answering them. The lesson content was quite suitable for andragogy. To assess students, the lecturer used basic questioning technique spread over the class.

The pedagogy seen in these observations were: teacher directed activities, teacher explaining every detail of the issues, giving a series of instructions, directing individuals/groups to present their work, outlining the lessons, solving problems to show examples on how to solve problems, and the use of ICT.

Junior lecturer`s classroom teaching
The junior lecturer`s classroom teaching was observed on a mathematics lesson. The topic was new to the students. The style of teaching applied by the tutor was 100% teacher directed. The teacher did everything on the chalk board, students were just looking, listening and sometimes noting. There was hardly any activity or students' independent thinking. Every problem was solved by the tutor. Besides these, assessment was seldom done. Neither blend of andragogy and pedagogy was seen applied nor was andragogy seen applied. It was fully pedagogy only.

Summary Interpretation
The senior lecturers tried the blend of andragogy and pedagogy till the learners achieved adequately the lesson objectives. After having ensured students` understanding of the subject they tried to incline slightly towards the andragogical approach giving more independence and freedom to explore further by students. Students were seen happy, contented and interested in the class with the way the teaching-learning took place. This was evidenced by their willingness to volunteer to present ideas/learnt lesson or take up the responsibility for

carrying out the assignments. At the end of the class, some students expressed their excitement and enthusiasm for the day`s lesson. Especially when the lecturers shifted their approach towards andragogy such as by letting students perform the tasks on their own based on the ideas taught, they were seen to be more active, energetic and excited since they were acquainted with the background of the task through the pedagogical approach of the lecturers.

The moderate senior lecturers were seen applying both approaches within the lesson. They were found keeping the shifting balance continuous between andragogy and pedagogy, sometimes more towards pedagogy. If the learners have understood the lesson then that was the end of their lesson of the day. It means the independence and freedom of learning for students were comparatively less than that seen in the senior lecturers` lesson. Students were seen happy, contented and interested in the class with the way the teaching-learning took place. This was evidenced by their willingness to volunteer to present ideas or to sum up the lesson or take up responsibility for carrying out assignments.

The junior lecturer`s lesson was fully in a teacher directed approach. It was mostly pedagogical: such as no sign of any blend of andragogy and pedagogy. The only reaction of students included: doubtful facial expression, no questions asked, no voluntarily answering the teacher's questions and most of them were silent. The lesson content was suitable for the pedagogical approach since the key concepts were new to the learners and a bit abstract for them to understand. Andragogy was not seen.

The conclusion from the observations of Lecturers` class room teachings, is that andragogy is in fact practiced in SCE classrooms. There is a seniority-based progression in the 'amount' of the practice of andragogy. It follows that one has to be well versed in his/her teaching area with adequate experiences in order to effectively handle the shifting balance between andragogy and pedagogy. Those lecturers who adopt andragogy in their lessons use them just out of their experiences and intuition besides the knowledge of the principles of adult teaching-learning.

Interviews
Through interviews researchers can collect in-depth understandings of qualitative information. The interview conducted with 10 lecturers and two senior students was a semi-structured interview. In order to shed more light on the data collected, the audio/video of semi-structured interviews conducted with two lecturers and two students have been recorded. To explore further, following three research questions were asked that guided the methodology and the data gathering techniques from interviews:
a) How do andragogy and pedagogy co-exist in the Teaching-Learning Process in SCE?
b) What could be the possible approaches to make an andragogical lesson?
c) The difference between ownership of learning in andragogy and ownership of learning in pedagogy.

Following are the results from interviews

Co-existence of andragogy and pedagogy

Although Malcolm Knowles` principle on andragogy does not focus on coexistence of andragogy and pedagogy, the following findings indicate andragogy and pedagogy co-exist in the Teaching-Learning Process in SCE.

The responses of the eight lecturers and one student indicate that there is co-existence of andragogy and pedagogy. For example, lecturer 5 said, "I always try to use andragogy and pedagogy by 50-50 even though the final year physics is very difficult to teach in the andragogical approach. The reasons for this are: this module is examination oriented, students are incapable to cope with the contents and the time allotted for this module is limited to cover the syllabus". This means there are many factors to consider to balance the application of these two approaches. For example lecturer 16 said, "According to the nature of the modules, time limit, quality of students, sometimes trying to become more creative, we need to make a shift back and front in between andragogy and pedagogy."

Lecturer 14 justifies the balance of shift. He said, "Firstly lecturers should be aware of "how we teach" then it might lead to student centeredness. In teaching elective modules we must balance the use of these two approaches." lecturer 15 added, "In teaching the professional modules, both approaches should be applied." Some lecturers try to apply equally both across all teaching areas for all the time while some apply only pedagogy or only andragogy or sometimes both according to the nature of the modules he or she teaches.

For instance: Lecturer 13 says he applies mixture of both depending up on the nature of the module. Lecturer 12 says he applies approximately 60% pedagogy and 40% andragogy in his teaching while the lecturer 16 says "I apply andragogy in a range of 50-60% and pedagogy by 5-10%." These figure means some lecturer are slightly tilted towards the application of andragogy whereas some are more towards pedagogy as evidenced by the statement of some participants. For instance the lecturer 11 said, "I apply mostly teacher centered approach".

The responses given by the students were in line to the above statements given by lecturers. For example student 2 said," Even though in the beginning, tutors in SCE deliver lessons through lecturing with lots of pedagogical approaches, finally they follow the andragogical approaches to cover up the module such as giving assignments , project works , tasks on presentation to be done by students, research work etc. Cooperative learning approaches are seen being implemented in SCE. So there is coexistence of andragogy and pedagogy in the Teaching-Learning Process at SCE".

Thus, these findings indicate there is co-existence of andragogy and pedagogy working together indicating the shift of teaching methodology slightly inclined towards andragogy although in most of the cases pedagogy is used first.

Possible approaches in andragogy

Lecturers gave different ideas for better approaches of andragogy: In the lecturer 11`s point of view, "Research based project work with theoretical frame work and making lessons similar to Place Based Learning(PBL)" helps in making teaching approach more andragogical. Put differently, in a research based lesson, students have self - directedness and freedom of learning by doing. Hands-on-experience is also gained through the PLB model of lessons. This obviously leads them to the induction process of the lesson and thereby they can learn by discovering themselves. PBL is a student-centered approach. According to the lecturer 17 giving more group activities, assignments, maintaining journals and letting students present are more practical approaches of Teaching-Learning Process. This is close to andragogy.

Teaching same class continuously for three consecutive semester obviously enables tutors know more about the student-teachers and identify their weaknesses and strengths. So long-lasting teacher-student relationship may make the teacher feel more secure in applying andragogy. For instance lecturer 12 supplements as follows:

"Same class should be taught minimum for three consecutive semesters, which enables the lecturer to understand more about the student-teachers".

Some lecturers have slightly classified point of views in making a better andragogical lesson. For example teaching professional modules, Post–graduate Diploma in Higher Education (PgDHE) and Distance Education (DE) B.Ed. need more of andragogical approaches. Reason is that professional modules have hardly few abstract content that need to be taught by more of teacher centered approaches, PgDHE students are assistant lecturers of Royal University of Bhutan (RUB) under various colleges. These students are mature and highly qualified. They do not need to be detailed about the subject matters. (DE) B.Ed. students are school in-service teachers undertaking B.Ed. Primary courses in Distant Education mode. So they are also quite mature and have at least some years of teaching experiences. In this regards, the lecturer 14 expresses as below:

Firstly lecturers should be aware regarding how we teach, then it might lead to student centeredness: lessons of professional modules should focus more andragogically. Post–Graduate Diploma in Higher Education (PgDHE) and Distance Education (DE) B.Ed. should be taught fully through andragogy.

Further, the lecturer 2 stated "The mode of instructions and the delivery of lesson for the DE candidates are mostly done in andragogical approaches and it is found to be very compatible and useful approach".

The lecturer 15 said, "Maintaining less number of student-teachers (max.30) in class and making student-teachers realize about andragogy would help make better andragogical teaching." Lecturer 16 supplements "For mature student, design the activity very carefully, more meaningfully and interestingly; fewer students obviously help make lessons more andragogical. So that the ownership of learning in students can be realized."

So some possible approaches worth noting to make teaching andragogical are research based project work, giving more group activities, PLB model of lessons, letting students present, teaching minimum for three consecutive semesters and maintaining less number of student-teachers (max.30) in class.

The ownership of learning in andragogy and pedagogy

As mentioned in the literature, the ownership of learning is more in andragogy than in pedagogy, this study also indicates the same points. For example, lecturer 11 further highlighted such belief below:

I think andragogy and pedagogy, both provide ownership of learning, but comparatively andragogy provides more ownership of learning. The learners at SCE are grown up and can understand the instructions properly. So it has made it easy to teach or help them Learn in andragogical ways. Thus, there is a shift from andragogy to pedagogy at SCE.

Student 1 supplements saying that in-depth learning beyond the prescribed topics takes place in andragogical approach, which is an indication of the ownership of learning of students. For example, he explains, "students can do in-depth learning beyond the prescribed topic. Teachers will be there guiding and helping the learners, but making it a student centered learning environment".

What I have seen is that both the lecturers and the students show a preference for andragogy: there is shift from pedagogy to andragogy; andragogy is compatible and useful especially for Distant Education; andragogy facilitates student-centred learning and also there is the co-existence of both. Thus this study indicates that the ownership of learning in student-teachers is provided more through andragogical approach by shifting between andragogy and pedagogy and vice versa.

Conclusion and Recommendations from the Qualitative Data Analysis

No matter how good the content is, quality of education depends up on quality of the delivery of lessons. Poor methodology of teaching will certainly add a bad impact on the quality of education. Lecturers and students of SCE have been found to have an adequate knowledge on andragogy and pedagogy and their coexistence in teaching styles depending upon the nature of the subject matter being dealt with. It was confirmed that these two methods of teaching in SCE coexisted. More andragogy and less pedagogy was found applied in teaching professional modules whereas it was opposite in the case of teaching the elective modules. In Distant Education, almost 90% teaching is andragogical. However, students are found to be more interested and prefer andragogy.

The data also indicate that the lecturers of SCE may be trained in andragogy so as to enable them apply it more efficiently in their daily teachings. For this, a module of andragogy is necessary. Whereas SCE has modules like 'Teaching skills' and 'Teaching Strategies' for pedagogy. Besides there is also adequate amount of resources for pedagogy, there is lack modules or reference materials for andragogy in SCE.

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