

A Study on Andragogy & Heutagogy in Adult Education with Reference to Bloom's Taxonomy

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ABSTRACT

The contemporary education portals have been witnessing the transformational change in terms of teaching-learning endeavours. It is also evident that as the learners climb the stairs of academic portals, the pedagogy is being gradually replaced by the andragogy that focuses more student-centric education rather than teacher-centric education. Besides, the Heutagogy is also gaining tremendous response from the professional learners' community. As per the Heutagogy, the learners may pursue their education online without any constant instructions from the teacher, besides, it also focuses at connecting the learners across the geographical boundaries. Due to the factors like convenient learning and effective mode of knowledge transfer, the Heutagogy has been accepted by the renowned universities and they are offering many professional courses through online. The only purpose of these certificate is to build workplace skills among the professionals

The study focuses on the importance Andragogy and Heutagogy in the contemporary academic portals with reference to the Bloom's Taxonomy in which the stages of learning processes are widely discussed. Besides, the population of 180 students were taken as sampling in order to collect the data. The results of the survey reports also determine that the professionals aspire more of Andragogical/Heutagogical learning processes than the traditional mode of learning in a classroom set-up. Further, the paper also suggests some of the effective learner-centric tools under Heutagogy that can effectively build the required professional skills among the professionals. Indeed, the suggested tools help the learners for an independent study and they are also intended to enhance their cognitive abilities.

Keywords: Bloom's Taxonomy, Andragogy, Heutagogy, Pedagogy

The contemporary world has been undergoing a drastic and transformational change in the domains of Science and Information Technology. Nurtured by Science and Technology, the

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Business world is also stretching its wings of expansion and embracing every nook and corner of the world. In this regard, the education sector which is acting as the human resource provider has been doing an exemplary job in terms of tailoring the professional skills of the students and presenting them to the organizations. Besides, the students have been greatly benefited by the academic insights that they get in the academic portals. However, a careful observation into the academic ventures of feeding the cognitive slots in the students reflect that the students have been excessively trained on the lines of pedagogy by restricting their independent cognitive development.

Edward L. Thorndike (1924) in his theory *the Adult Learning* infers that the adult mind is completely active and receptive only if the transfer of skills or knowledge is enriched by the strategies portrayed in the below figure:

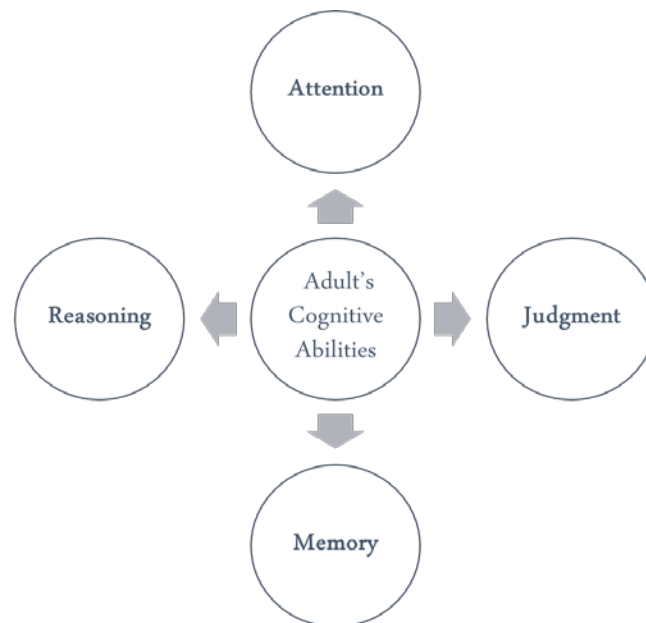


Fig. 1. Thorndike's Stages of human cognition

Further, Thorndike opined that the cognitive faculties increase based on the practice and experience through various walks of life. Hence, he also suggested that the *Mental Muscle Approach* that expounds on the increased cognitive strengths through the developmental stages of an individual development.

On the lines of pre-existing education theories, Benjamin Bloom (1956), an eminent education psychologist, suggested the three domains of learning that is reflected in the figure:

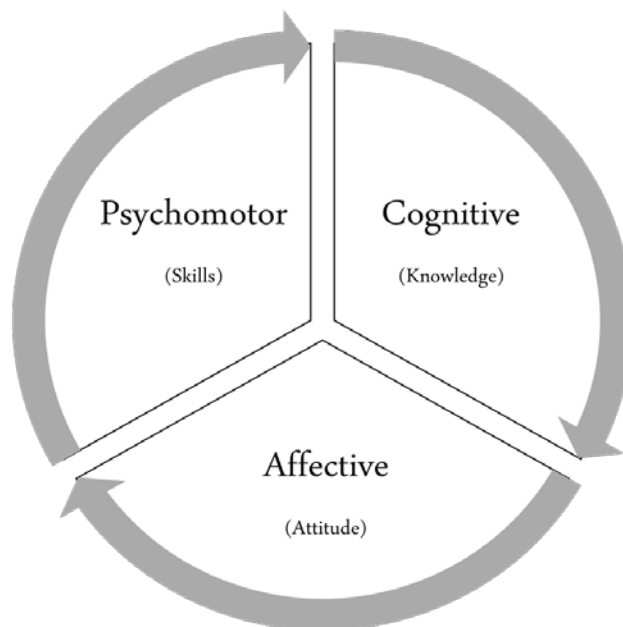


Fig. 2. Benjamin Bloom's three domains of learning

In continuation, it is also inferred that the students in adult education may be approached through these domains to make the learning effective and it can ensure the holistic development that will definitely contribute to the continual learning processes in an individual. Further, Benjamin Bloom contemplates on the hierarchical settings of learning objectives based on the cognitive strengths of the learners. As it is implied above by Thorndike's *Mental Muscle Approach*, the receptivity level of the learners in the isochronism of knowledge acquisition, gradually, increases based on their exposure and experience in various domains of knowledge and skills. Accordingly, the severity of the learning should also increase in order make the education compatible to the cognitive strengths of the learners

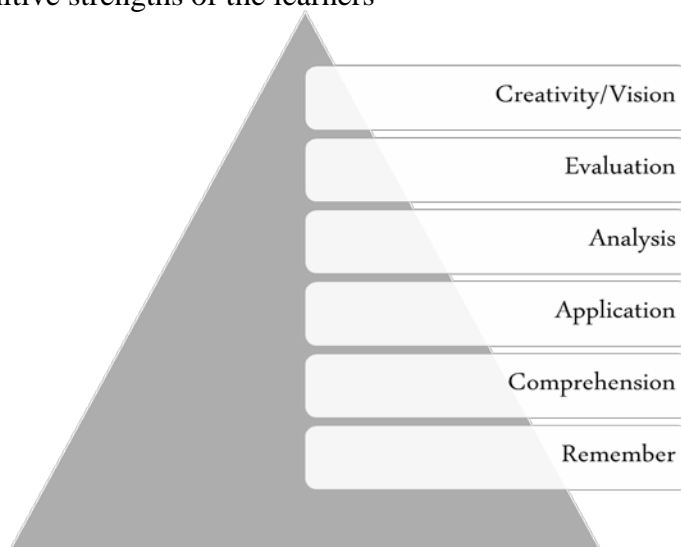


Fig.3. Bloom's Taxonomy and five stages of Learning

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With reference to Blooms Taxonomy, the first five stages four stages focus more on personal guided learning in which the facilitators plays a major role in achieving the learning objectives. In terms of education system in India, the learners since the school days have put through these learning process and their cognitive levels have been trained to master these levels. With reference the curriculum and pedagogical designs of Indian Universities, the learners till their Under-graduate level, they learn to remember the numerical values, comprehend the simulated situations, virtual application of their learning and the analysis of outcome.

Conceptual Definition of Terms

- Bloom's Taxonomy: Dictionary defines Bloom's Taxonomy as a *way of distinguishing the fundamental questions in the education system*. In this research paper, it is also referred to the process of human cognition that rises from simplicity to complexity.
- Andragogy: Andragogy can be defined as an educational teaching process which is adopted in teaching adults.
- Heutagogy: Heutagogy can be defined as self-determined and student centric learning while challenging the traditional methods of pedagogy which is a teacher centric. In this study, the terms also means that online system of education that drives the professional learning ventures.
- Pedagogy: The term pedagogy has a wide interpretation in the process of education system, however, this research paper considers the terms pedagogy as a teaching tool adopted to achieve the purpose of knowledge transfer in teacher-driven learning process and it may not be student-centric.

Purpose of the Study

The purpose of the study is to ascertain that the traditional pedagogical approaches may become obsolete as they go to the higher levels of professional learning. Further, the study also believes that the professional learning cannot be teacher-centric as the teacher cannot teach or impose their ideas on the learners as this may curtail the creative abilities of the adults. Hence, the learning process should be learner-centric and it is assumed that the learners have the ability of independent learning with minimal facilitation by the teacher through online. It is also believed that the professional having learning inclination may find comfortable in enriching their intellectual abilities through online mode as it does not interrupt their day to day professional obligations. Furthermore, the purpose of the study is to propose new Andragogical methods to provide igniting learning experience to the learners.

Limitations of the Study

The samplings were based on the same academic, social and cultural background. Hence, there is no much discrepancies in the dependent variables. If administered of the diversified subjects, the results may reveal much scope for research. Further, the importance of Heutagogical tools over the traditional pedagogical tools may require much more expansive study.

METHODOLOGY

The study aims at investigating the young professionals' inclination for further professional studies and also to understand the mode of education that they prefer. Accordingly, it is also presumed that the learners prefer the convenient access to the learning ambience. This section will outline multiple aspects of the research conducted, including: research objectives, planning, instrumentation utilized, participant/subjects, data collection and analysis procedures, and limitations of the study. The following research objectives and expectations were established by the researcher and agreed upon by all parties involved.

Profile of the Respondents:

The respondents were 120 in number (90 boys and 90 girls) and they all graduates of different streams. Currently, they are pursuing Postgraduate Diploma at Manipal University, Bangalore Campus and they are also the probationary officers of AXIS Bank. The respondents belong to the same socio-cultural background and they hail from Urban or semi-urban areas across India.

Instrumentation:

As a part of data collection, a questionnaire was administered on the chosen subjects on their preferred learning style. The questionnaire had 16 items based on the four broad categories. Those questions were based on their preferred learning mode. The questionnaire is on four point scale and each item has four responses like; strongly agree (4), agree (3), neutral (2) and disagree (1). The highly agreed statement derives score of 4 and the least has the score of 1.

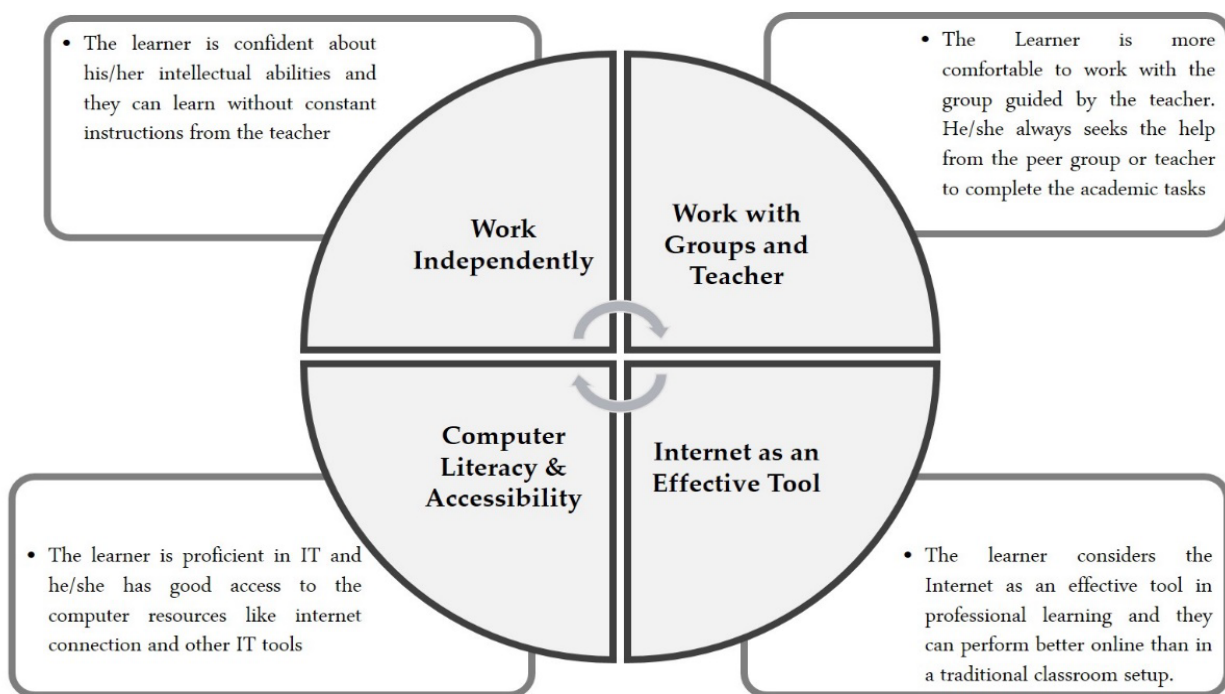


Fig.4. Four domains of the Questionnaire

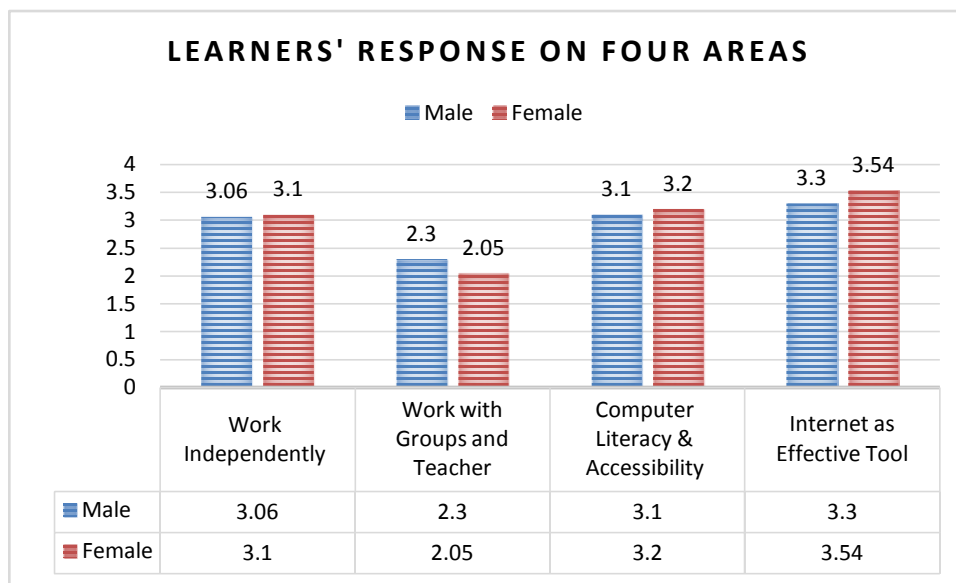
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Data Collection and Procedure:

The data was collected by administering a paper-pencil response sheet and the questionnaire had 16 questions and there were 180 respondents (Male=90, Female=90). Prior to the administration of the test, the respondents were informed about the objective of the study and they were also informed that the responses should be honest and there are no right or wrong responses. Later, the statistical data was obtained from the response sheets to support to presumptions.

Data Interpretation:

The graph reflects on the response on four categories like Work Independently, Work with Groups & Teacher, Computer Literacy & Accessibility and Internet as Effective Tool. Further, male respondents and female respondents have given 3.06 and 3.1 ranking on four point scale respectively, wherein, they preferred to work independently and they are more confident about their analytical, comprehensive and evaluative skills. It is also presumed that these respondents seek more to explore their learning abilities independently.



The second area *work with groups and teacher* has been given 2.3 and 2.05 rating respectively by the male and female respondents. This can be inferred that this area is least preferred by the respondents. It is also understood that the learners may not prefer much the traditional learning in a physical setup wherein the learning processes are entirely driven by the instructions given by the teacher. Moreover, the respondents might have also felt that this learning set-up is not convenient for the professional learning.

The third area *Computer literacy and Accessibility* has secured 3.1 & 3.2 rating from male and female respondents, respectively. This can be inferred that the responded learners have

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reasonable accessibility to the IT resources and they are good in utilizing those resources for self-learning.

The fourth area *Internet as Effective Tool* has gained 3.3 and 3.54 rating from male and female respondents, respectively. This data reveals that the learners consider the Andragogical mode of learning as effective means for professionals. This also reflects that the learners are proficient in the elementary stages of education suggested by the Blooms Taxonomy and they have also opined that they can be more creative and productive through online mode of learning instead of teacher-lead learning process.

The Survey outcome

Based on the data interpretation, it can be inferred that the learners from professional community (postgraduate level) have more inclination towards the Heutagogical model of learning. With reference to Blooms Taxonomy, the first three elementary stages prescribed for learners (remember, comprehension and application) may not require any teacher-lead learning process in a physical classroom setup. It is also observed that learners who gained the academic exposure till Post-graduation may prefer Andragogical learning rather than going through the pedagogical learning. Moreover, the learners have also displayed they are confident the next three stages of learning (Analysis, Evaluation and Creativity/vision) can be self-driven by the learner with minimal online instructions from the facilitator.

1. Suggested Andragogical/Heutagogical Tools for Igniting Learning Experience

As it is observed in the data obtained from the respondents, it can be presumed that the learners prefer for learner-centric mode of academic acquisition. Hence, the Andragogical tools may be based on four main domains:

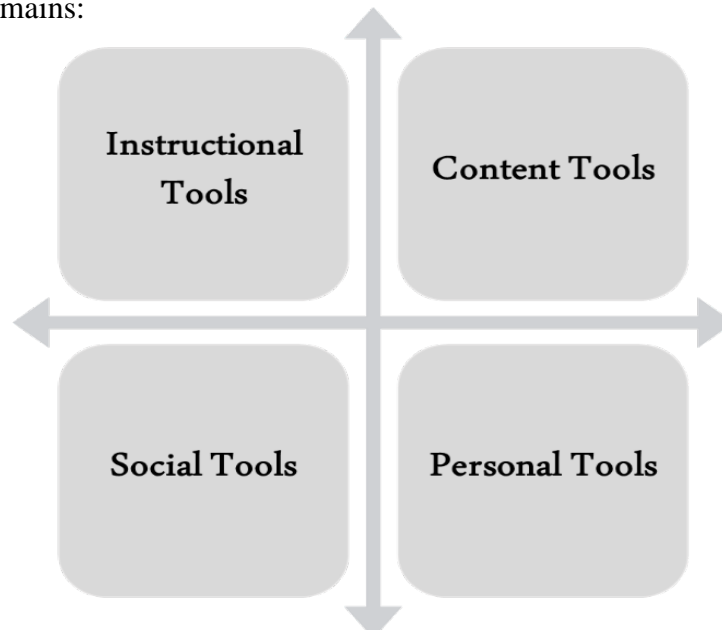


Fig.6. Four domains of Andragogical and Heutagogical Tools

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1.1. Instructional Tools: It is an evident fact that the companies of international reputation have collaborated with the academic portals through Massive Open Online Course (MOOC) through which the professionals are being trained on workplace behavioural skills and they also offer certificate course for the professionals through the online mode.

Coursera is another platform that aims at linking learners and the top of universities of the world and makes the learning objectives of the learners achievable. Moreover, it is an advanced learning platform and the course offered by the universities are intellectually challenging. Indeed, the learners have to be more creative and innovative and every pace of learning driven by the learner himself. Alike, Udemy, an online education portal that caters to the needs of the learners and it also provides a variety of course options so that the learners have options to choose the best compatible to their need.

Further, the learners can also collaborate with the other learners in order to discuss about the assignments or any other course related material. Further, the access to the data collection tools has been made easy for the learners and this option reduces the physical efforts of the learner in collecting data for the research and for course completion.

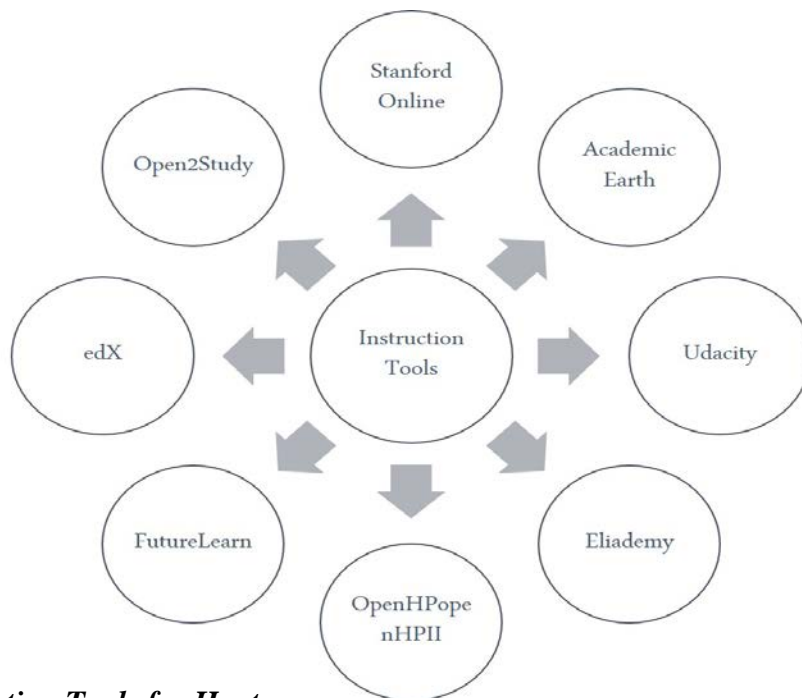


Fig.7. Instruction Tools for Heutagogy

1.2. Content tools: the content tools refer to the knowledge material pertaining to course. Indeed, there are many websites that share knowledge on diversified areas and the learners have access to the content. However, the learners have to determine and evaluate the quality of subject knowledge posted on the websites. The beauty of these websites is that they have free access. Besides, the learners may discover creative ways of exhibiting his/her intellect through this platform.

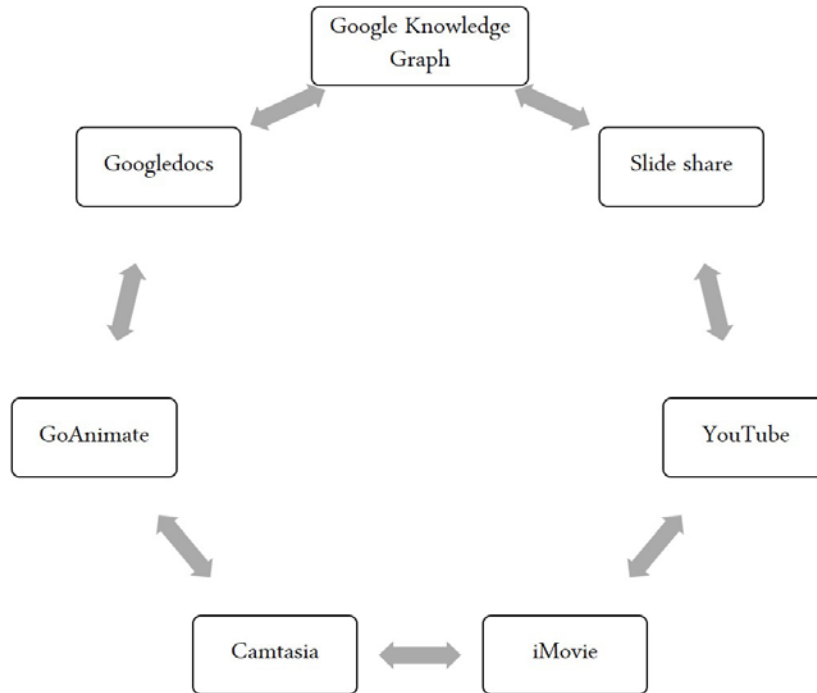


Fig.8. Content Tools of Andragogy

1.3. Social Tools: the social media has been playing a vital role in knowledge transfer wherein the learners update themselves in terms of their learning requirements. Moreover, man being a social animal always craves for the social interactions and evidently, the learners find an igniting learning experience in the social groups. These social networking portals help the learners to share and receive required knowledge.

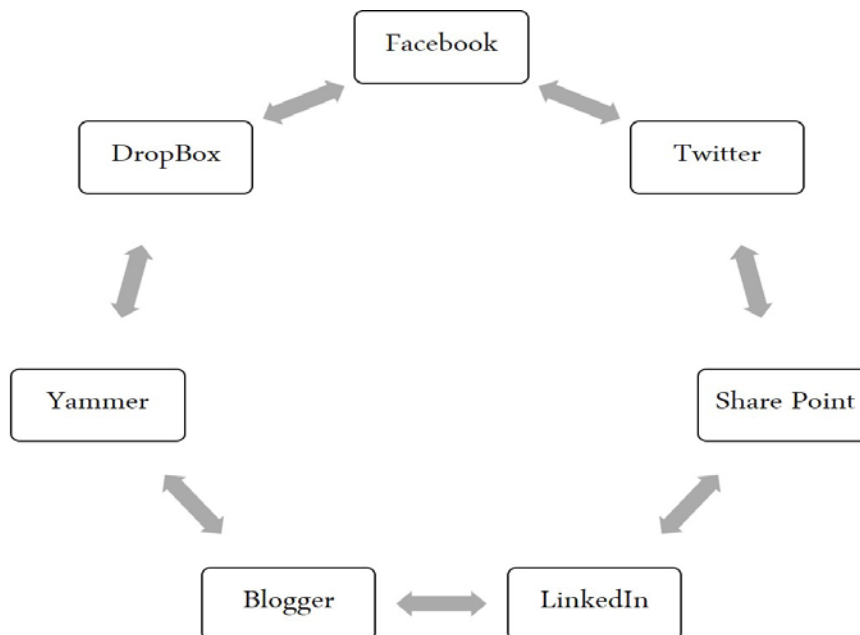


Fig.9. Social Tools of Andragogy

1.4. Personal Tools: Personal tools refer to the knowledge transfer or receipt of knowledge through the learners' personal source wherefrom they can individually the required pieces of information and also discriminate acquisition of knowledge.

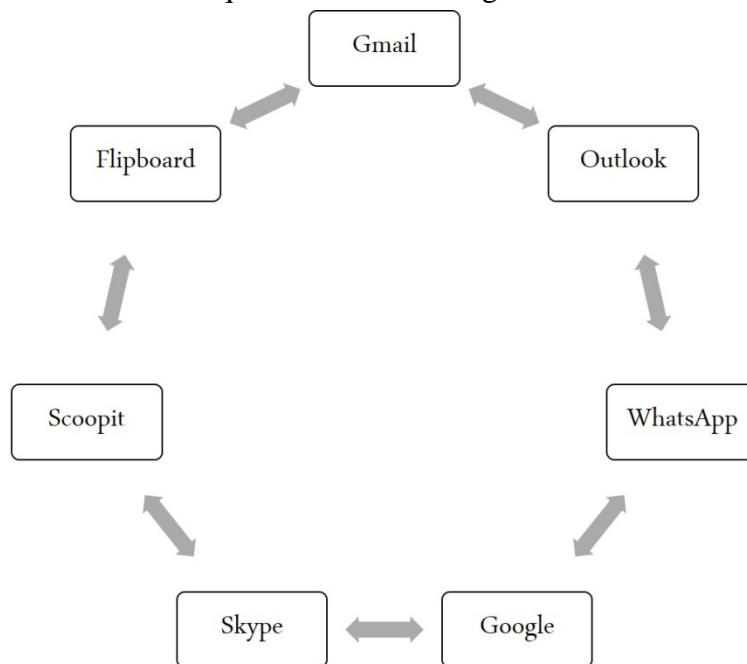


Fig.9. Personal Tools of Andragogy

2. Application of Andragogical Tools in the Process of Heutagogy

The study focuses at imbibing all the Andragogical tools in making or giving enriched learning experience to the learners through online. Moreover, it can be observed that all the suggested tools focus on learner-centric. Further, the postgraduate students or professional learners have to be given sufficient scope in exploring their hidden intellect. Indeed, the intellect that had been trained since the elementary education will help the learners to study independently by the using the suggested tools. Helping the learners to explore themselves various pieces of information or knowledge help the learners to be more innovative and creative.

CONCLUSION

The study focused on the relevance of Heutagogical tools in higher education and it also presumed that as the students go to the high level of professional education, they prefer to go for independent study with minimal teacher instructions. This presumption was supported by the survey report which as derived from POs of AXIS Bank.

Although the students prefer to have professional education and they have also shown their confidence in independent learning, it can be inferred that the considerable teacher-led teaching process is required for a successful skill building process. In addition, there are many online

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portals offering certificate or diploma courses on specific knowledge areas and they are doing a tremendous work in terms of bringing education to the doorsteps of the learners.

In this era of Science and IT transformation, the education system is significantly transforming its teaching learning processes, however, the minimal face-to-face interactions may also contribute to the effective learning outcome.

Acknowledgments

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interests

The author declared no conflict of interests.

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How to cite this article: Umashankar K, Charitra H (2016), A Study on Andragogy & Heutagogy in Adult Education with Reference to Bloom's Taxonomy, *International Journal of Indian Psychology*, Volume 4, Issue 1, No. 81, ISSN:2348-5396 (e), ISSN:2349-3429 (p), DIP:18.01.132/20160401, ISBN:978-1-365-59365-9