

# Optimising E-learning Activities for Enhancing Learning and Engagement in Gen Z



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*E-Learning is the popular buzz word in learning space today. It has caused disruption to the traditional classroom learning. The present study is based on the perceptions of students of higher education mapped to the AARRR Framework and subjected to statistical analysis. The paper explores the scope for engaging and retaining learners exposed to E-Learning. The respondents were exposed to E-Learning through MOOC courses provided by popular E learning portals. The outcome of the research would help in curating instructional design for E learning and help organisations explore new domains to provide better engagement to learners.*

**Keywords:** E-Learning, Gen Z, Millennial, AARRR Framework, Engagement

## 1. Introduction

Business pioneers have been experiencing disruptions in the work environment, culture and it has created impact on the management styles. Changes are most visible in the form of OPTIC (Office Layout, Policies, Technology, Informality and Churn). The approach of organizational transformation and advanced volatility in business environment is prompting a cooperative workplace. It pushes us to go the additional mile and be all around aware of the transformation in the workforce mindset. The landscape of administration has developed from hierarchy to a wide organisational structure and networking with workers, clients and partners are never again limited to just focussed gatherings, with the intent of technology. This causes us to adequately use technology, be up-front and take intelligent moves. In the midst of these, is the indispensable characteristics that have constantly molded into an organisation the qualities of responsibility, innovativeness and development. The quickness of technology has been the single greatest distinct advantage, bringing a pile of potential outcomes once observed in science fiction and motion pictures to the real world — like massification of cell phones, bringing internet to households and smaller family unit, and making society increasingly advanced with developments than never before. This has prompted each business establishments in changing their focus in the methods adopted in their organisation. Mergers and acquisitions were indicators of scale and scope, however today achievement is reliant on start-up-like characteristics, like agility, advancement, development outlook and individuals focussed work groups. This situation is observed to be replicated in learning space also. Consequently there exists a need to interface students behaviour and frame of mind with fitting learning situations to create a self directed learning and engagement.

## 2. Integrating AARRR Framework with Gen Z and Millennials -Learning Patterns

Millennials experienced childhood with a hardware filled and progressively on the web and socially-arranged world. They are the generation, who got the most promoting consideration in every activity they were exposed to. As the most ethnically exposed generation, Millennials will in general be tolerant to diversity and indeed prefer diversity to stable environment around. Having been raised with lot of opportunity, being told they were extraordinary, they in general is perceived to be confident. While to a great extent a positive quality, the Millennial has been exhibiting unique requirement and self-importance. With millennial comprising a workforce of about 50 percent of the total manpower by 2020, a more understanding of millennial practices in the area of learning and understanding is of utmost importance. Management researchers have identified the professional desires and needs of individuals among "millennial" and investigated their expectations and priorities at work place across their life cycle to note down their change in expectations (Ng, Schweitzer & Lyons, 2010) and found that Millennials put the best efforts on individual tasks. They had sensible desires at work to accomplish and influenced by compensation yet were looking for opportunities and the advancement of new skills and abilities. The outcomes identified that Millennials' desires and qualities fluctuate by gender, status, academic performance, and year of study. Millennials, are also on contrary considered to be egotistical, unmotivated, disrespectful, and unreliable. They are also said to exhibit positive characteristics—they move well in groups, with open support, and are calm with communication styles (Myers and Sadaghiani, 2010). The condition that the recent college graduates have experienced in their childhood is not the same as those accomplished by the yester generations. The data collected from college graduates provide input that they are extremely facilitated with updated information from the web, for the most part they prefer informal organizations, and they feel that they should be heard when they speak (Bauerlein, 2011).

The Net Generation or Millennials, have special attributes that separate them from the learning patterns of the other generations and groups from different ages. The interesting qualities are that they are no longer influenced by the customary classroom structure, and teaching pedagogy used for understanding in the conventional classroom. Education can never again be compelled but rather has to flow smoothly by creating learning desires.

The Net Generation grew up and is accustomed to a computerized world. Activity and simulations empowers them to learn better (Oblinger and Oblinger & Lippincott, 2005). Consequence to this advanced environment and learning facilities, Net age are exposed to visual, auditory and kinesthetic learning styles all embedded into one (Brown, 2000). They can examine visual pictures and have interests in learning visually (Howe & Strauss, 2000). Researchers feel that the generation no longer prefers knowledge available in books and slides and are not able to follow the pace of learning offered to him in a closed classroom environment. To take care of the issue of learning they require their own pace of learning and environment, they depend a lot on Google to seek solution and research on the idea, finds a URL for rebuilding the concepts that better clarify the idea, and quickly disseminates this URL to others in the class. The Net generation looks for quick data and information not by discovering it in a course book, but rather by interfacing with the Internet and then distributing them through collaboration and IT enabled socialization platform.

A wired classrooms are an undeniable requirement for a Millennial learning environment, since they don't react to traditional design of learning, it is vital to exploit their needs for various tasks and capacity by posting course notes with pertinent web references so that they can investigate significant resources and get connected with the learning required for the context. To address the issues of students, e learning platforms can enable building up a site page for each course. The web platforms can contain class materials, notes, slides, a webliography, and other relevant mixed media. This isn't just imperative to the net ages yet in addition to nontraditional students who welcome the adaptability of discovering class materials while maybe learning offline. One may likewise need to consider having a mixed course with some social interactions time and some electronic collaborations; this is especially important for the nontraditional learning mode. The utilization of modernization and innovations in learning platform will help to attract students to the environment that provides social interaction they want with the input they require. Blogging is another technique that enables learners to communicate and accumulate knowledge persistent with the course. Students can look into their data and make their views heard on their learning through the blog (Skiba, 2005).

The Net Generation lives in a portable world which encourages their performance on various tasks at their pace. Consider podcasting which offers new knowledge that addresses the learning needs at the convenience of learner, he can access it at his location through iPods or other MP3 gadgets. This generation is inclined toward intelligent technologies, responsive to their situation that enables them to collaborate with the educator, student resources, or with the other learning resources. Learning is a social movement (Tapscott, 1998), and in that capacity ought to connect with and intelligent. Intelligence can be generated from learners themselves, workforce, different experts, for example, specialists in the field. Millennials are inclined toward gathering knowledge at their pace through variety of choice of media (Howe & Strauss, 2000). Their preference takes into consideration the usage of innovative simulation techniques and a community oriented learning. While past ages preferred individual based learning in a common classroom, millennial grasp community learning in both one to one as well as in online mode. Net Generation has little resilience for delays. They live in a 24 x 7 x 365 world. They anticipate instant access and instant reactions. Email is "obsolete" when you can IM (text) or instant message somebody promptly. Net ages are multi taskers and used to being overwhelmed by various procedures at jerk speed. They are portable travelers who are constantly linked with their online groups (Rheingold, 2003). Their availability through phones, remote PDAs, or workstations cultivates quick and brisk correspondence. They utilize short hand interchanges that appear as pictograms to the large contextual sentences. They have a passionate and complete transparency just as a regard for assorted variety and free articulation of views and ideas (Tapscott, 1998)

There is no doubt that the new age of learners is truly transforming from conventional knowledge acquisition methods in higher education. So as to suit the Net Generation in learning environment, it is essential to devise learning exercises that line up with their learning styles and desires. It is additionally essential to recollect that one should begin with the resources to be assimilated and after that make sense of what advances may empower the action. Consequently Net Generation's inclination is towards, experiential and engaging environment, interactivity and collaboration, immediacy, connectivity and communications. Pirate Metrics, or "AARRR" by Dave McClure considers five most essential measurements for success of online business: Acquisition, Activation, Retention, Referral, and Revenue. Acquisition is the initial phase in the Pirate Metrics process, and it's regularly the sole piece the customary advertisers center around. Activation is about mindfulness and conveying the correct individuals to your site or item utilizing a couple of basic measurements to follow the most essential client activities. Retention is about the primary experience the client has with the portal. It isn't sufficient to motivate individuals to download your application as well as even join. For a greater impact, they have to revisit the item or converse with somebody at the organization. This is considered as a successful engagement and initiation. Retention implies individuals routinely returned to utilize the item. For an online business it implies somebody purchases from a website once as well as on different occasions. The most flawlessly approach to drive development is through referral. Intergrating AARRR model into e learning will make learning effective for Millennials (Smørsgård, 2016). The pirate framework begins with acquisition; this can be enabled by use of customized content based on the individuals learning preferences, initiated with the facilitation from teachers or friends. It satisfies the millennials need for safeguarding their interest, pace, place and style. To carry forward the learners into the next stage of acquisition opportunities to learn new concepts has to be initiated and to apply to different scenarios. Tools like gamification and case study scenarios enable the same. The interest for peer learning, teamwork, feedback and

social learning is ensured in E learning methods. Retention can be enabled only with intense cross functional learning and much stronger feedback by incorporating Quiz, and feedback providing assessments; this satisfies the millennials thirst for immediate and regular feedback, attention seeking behavior and instant gratification. Revenue generation is perhaps a vital and this can be provided by using group learning widgets with colourful content, DIY kits or combos of courses that would encourage the need for being self-reliant and meaningful work. Driving of referrals can be encouraged among existing learners by creating an urge of being publically visible through leader boards, badges, awards that help them secure career opportunities and live internships. This transforms them into confident, active learner who urges entry of more learners into the fold. This integration of startup model with learner's characteristics can provide a symbiotic benefit to startup as well as learner.

### 3. Methodology

Descriptive study was conducted among students who were exposed to E-Learning platform hosted by an external service provider. The course content was curated by the subject teachers as well as the service provider. The system was based on a pay-per student basis, however the cost was borne by the institution. The students were simultaneously exposed to classroom teaching, online learning contents and peer learning on the e-learning platform. After a detailed discussions conducted among the students, as well as based on review of literature the researchers identified the need for exploring the preference for curated learning materials, regular up gradation of skills and competencies through additional learning materials since the Gen Z also aspire to improve themselves with latest skillsets, in addition they are prompted to learn more through peer support. The focus of this study was based on two questions, the first the influence of different learning on students and the second on their preferences or motivations at each stage of learning process. To assess the first question the students were asked to provide a self evaluation based on their perception while for personally assisted forms of learning the influence of social learning concepts aided through peer assistance and social comparison concepts were considered. Most of the previous studies generally focused on outcome of learning while in this research the focus is on the process of learning. Primary data was collected from the respondents using online forms. The opinion of the respondents was collected using a 5 point scale, ranking method etc., A pre-test with a sample of 10 questionnaires were used to check the validity and reliability of data. The collected data was subjected to test of reliability, and after the data cleaning the calculated cronbach alpha value was more than .7 (Nunnally, 1987) hence the questionnaire was adopted to capture data pertaining to the study. The online form was circulated to all the subscribers of a management course through specific online platform and the data was captured for analysis.

### 4. Data Specification

This study was based on students of higher education pursuing management courses. Data was collected from 150 respondents. Majority of the respondents preferred E-Learning as a mode of pedagogy and majority of them who preferred E-learning had engineering as their graduating discipline as given in table 1 below. There was statistically significant association between graduating disciplines of the respondent and their preference for choice of pedagogy.

**Table 1** Statistics on Choice of Pedagogy and Self Efficacy

Distribution in Percentage		Graduating Discipline				Statistical Tests (Valid Cases: 150)	
		Engineering	Science	Arts	Total	Pearson Chi-Square	Significance
Choice of pedagogy	Classroom Teaching	11.3	7.3	11.3	30	23.033 <sup>a</sup>	.000
	E Learning	53.3	10	6.7	70		
Level of Self Efficacy	High	40	6	2.7	48.7	22.908 <sup>a</sup>	.000
	Medium	14.7	7.3	11.3	33.3		
	Low	10	4	4	18		

The effectiveness of the pedagogy was evaluated based on comparison of the GPA Scores earned by the students in the term end examinations. Since the GPA scores were not normally distributed as reflected by the Kolmogorov-Smirnov Z test. Kruskal-Wallis Test, non parametric test was conducted as indicated in Table 2 the results of the analysis showed that there existed significant differences among groups based on graduating disciplines when compared with their GPA Scores.

**Table 2** Establishing Significant Differences in Group based on Graduation

	Ranks			Test	Values
	Graduation	N	Mean Rank		
GPA Score	Engg	97	95.36	Chi-Square	63.703
	Science	26	54.13	df	2
	Arts	27	24.72	Asymp. Sig.	.000
	Total	150		Grouping Variable: Graduation	

Further factor Analysis was conducted to identify the preferences of the respondents on various aspects of e learning, the output indicated a factor extraction consisting of 5 factors with 78.2 percentage variances explained. The five factors extracted were Interesting content (21.9), User friendliness (16.3), Affordability (14.3), collaboration (13.5) and competition (11.9). The tool used for data collection had also captured the preferences of respondents based on the ranks offered by the respondents for the parameters such as Attraction, Activation, Retention, Referral and revenue. The data collected through ranking has been converted into ratings. 16 plan cards were generated at random using orthogonal design in SPSS 23 and effect coding has been applied to perform regression.

**Table 3** Effect coding for various Attributes and levels

Attraction	X1	Retention	X3	X4
Teacher facilitated	1	Peer Support	1	0
Friends	-1	Reminders	0	1
Activation	X2	Contests	-1	-1
Widgets	1	Referral & Revenue	X5	
User Interface	-1	Redeemable Points	1	
		Leader boards/Wall of fame	-1	

The data collected based on the plan cards was subjected to regression analysis with rating as dependent variable, effect coding was applied to the attributes as presented in Table 3 and the model showed an  $R^2$  of .895, which indicated a stable model for prediction. All attributes were significantly contributing to the dependent variable

**Table 4** Regression coefficients of the Attributes

	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	186.867	.983	.000
X1	-5.000	.932	.000
X2	-2.700	.932	.016
X3	8.333	1.243	.000
X4	-4.867	1.458	.008
X5	-1.700	.932	.098
a. Dependent Variable: Rating			
Model	R	R Square	Adjusted R Square
1	.946a	.895	.843

Table 5 presented the utility values of the attributes, retention had the highest percentage of utility with 41.25% followed by attraction with 31.25%. Activation and Referrals too had a significant contribution to the total utility values.

**Table 5** Utility Values of the Attributes

Attribute	Level	Utility value estimates	Range of Utility	% of Utility
Attraction	Teacher facilitated	-5	10	31.25
	Friends	5		
Activation	Widgets	-2.7	5.4	16.875
	User Interface	2.7		
Retention	Peer support	8.333	13.2	41.25
	Reminders	-4.867		
	Contests	-3.466		
Referral & Revenue	Redeemable Points	-1.7	3.4	10.625
	Leader boards/ Wall of fame	1.7		

Among retention attributes considered for the study, utility estimates for peer support was the most preferred motivators for learners as specified in Table 5. User Interface had contributed to encourage more activation. Other attribute levels that had created interests in e learning platforms were the encouragement from friends and rewards in the form of leader boards. However the highest ranked combination of utility as presented in table 6 had a value of 14.33 comprising of Attraction

initiated through friends, Retention contributed through Peer support, Good interface of platform leading to activation and redeemable points creating an encouragement for referral learning resources to peer

**Table 6** Utility Values of the Attributes of Highest Ranking Combination

Attribute	Level	Utility value estimates	Total Utility
Attraction	Friends	5	14.3
Activation	User Interface	2.7	
Retention	Peer support	8.3	
Referral & Revenue	Redeemable Points	-1.7	

## 5. Results and Discussions

The results and findings obtained out of the empirical research points to the fact that the use of appropriate teaching pedagogy can influence a student academically as well as psychologically. Most of the students preferred E-Learning to traditional classroom teaching and choice of pedagogy was found to vary based on type of graduation of the respondents. This is due to the fact that the students pursuing Technical courses are open to E- Learning. However with growing intent of entire Gen Z on Electronic gadgets, E-learning will dominate learning space. Self efficacy perceived by the students exposed to appropriate learning pedagogy was high. Most of the technically oriented students were contented with E learning mode of learning and hence they exhibited greater self-efficacy than their non-technical counterparts. The CGPA scores based on the graduation discipline also establishes that the scores secured by technically trained respondents were high. Students preferred interesting content in an User friendly platform at Affordable price, providing opportunities for collaboration and competition. This resonates well with the AARRR model. The study highlighted that peer played an important role in enhancing the effectiveness and engagement of learners. The User Interface too has to be attractive and should provide an enriching experience for the learners, rather than being monotonous. Hence a dynamic learning portal can attract learners towards knowledge accumulation and better self-efficacy. Leader boards can motivate achievement oriented learners, however the utility values arrived using conjoint analysis points to the accumulation of redeemable points as a motivating factor in E learning platforms. Hence moderately challenging environment can create greater engagement among millennials.

## 6. Conclusions

The most significant outcome of the study is the integration of AARRR model of online ecommerce in E learning space. Be it a product or a service, it has to exhibit product market fit for an effective conversion process and later find a scalable repeatable and sustainable business model, which in E Learning can happen only through learner engagement. The present study is based on a learning platform initiated through institution with contents curated and facilitated by faculty members of the institution. Hence the attribute levels are unique to the portal used by the learner. This study does not include independent learning portals not initiated by the institution, where the attribute level may vary. Further research can be in the direction of independent learning portals where participation is initiated by learner himself rather than teacher as a facilitator. However the study points at the appropriateness of using AARRR model in E Learning for learner engagement

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