

The Effect of Simulation Games in Improving Grade XII Students' Academic Performance in Economics: An Action Research

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Abstract

This study investigated the effect of simulation games as an intervention strategy in the teaching-learning process to enhance performance of grade XII students in economics. The study adopted a mixed method research approach. A total of 27 (14 girls and 13 boys) grade XII students from one of the higher secondary schools participated in the study. The students were selected through non-probability convenient sampling techniques. The data sources include students class test score, narratives from the classroom observations and survey data. The findings revealed that the students were very positive about the use of simulation games as a classroom pedagogy. Simulation games help students comprehend concepts, ideas, and hypotheses easily besides making teaching-learning interesting, enjoyable, and fun as evident from the increase in mean marks in the class test 2 and high mean average score of 4.5 in the survey rating. However, the study also cautions that the simulation games are time-consuming and teachers need more time and effort to prepare and implement in the class.

Keywords: simulation games, class test, action research, Economics

Introduction

The poor performance of students in Economics in the Bhutan Higher Secondary Education Certificate (BHSEC) examination has been a worrying matter and a serious concern for economics teachers across the nation (Dorji, 2019). This poor performance has resulted in students opting for other optional subjects such as Environmental Science, Media Studies, and Agricultural Studies. Students find it easier to comprehend and score good marks in these subjects although these subjects have poor ability rating for higher education admission in Bhutan. Some schools have stopped offering economics at all because students' low scores affect the average (Rinzin, 2019b) and ranking of the schools.

Boris (2020, p.74) argues that a "teacher may profess to hold fifteen years' experience, but the experience means nothing if he keeps on repeating the same thing without bringing innovation into his teaching." The effectiveness of the teaching-learning process depends mainly upon the methodology that the teacher

adopts (Jibrin & Zayum, 2012; Yadav, 2006). According to the National Council of Educational Research and Training [NCERT] (n.d.) and Jibrin and Zayum (2012) one of the main reasons for the poor performance of students in economics is the poor selection of teaching-learning methodology. A study by Dorji (2020a, p.44) observed that many teachers were not using pedagogy such as “cooperative learning, problem-solving, student research, role play, differentiated learning, experiential learning, concept mapping, flow charts, simulation games, project-based learning, learning through feedback, team teaching, and co-teaching, live consultancy assignments, and pedagogy of service-learning” in the classrooms. There is a long history of teacher resistance to pedagogical changes in Bhutan (Sherab, 2013; iDiscoveri Education & Royal Education Council, 2009). The NCERT (n.d.) found out that in the innovative and digital world many teachers still use traditional or conventional teaching methodology such as lecture among others. Teachers adopt traditional teaching methodology to cover the content-laden curriculum on time. Although the lecture method helps teacher to teach economic concepts however it does not help to develop enough cognitive learning skills nor motivates students. It does not promote students’ participation in the teaching-learning process. It reduces the students’ interest in the subject. As a result, it limits student’s performance up to the knowledge level and does not develop creating and application abilities (Vlachopoulos & Makri, 2017). To make students think like an economist or scientist, an innovative approach to teach economics needs to be undertaken. Innovative teaching methodology creates interest in learning economic concepts and student’s participation in the teaching-learning process. Students need to be engaged in the curriculum rather than teachers limiting the transaction via a blackboard/green board and textbook (NCERT, n.d.).

The simulation game is one of the most researched teaching methodologies in teaching-learning economics. Simulation games provide a crucial opportunity to motivate and engage students to learn theoretical concepts, terms, facts, conventions, trends, and principles. Many economics concepts, terms, facts, conventions, trends, principles, generalizations, assumptions, and hypotheses can be taught using simulation games. According to NCERT (n.d.) topics such as Fixed Cost and Variable Cost (game), Perfect Competition (Role Play), Price Elasticity of Demand (game), Aggregate Demand (game), and Value Added (Roleplay) can be taught through simulation games. The simulation games methodology shifts teacher-centred teaching to a student-centred teaching-learning to allow students to acquire problem-solving and communication skills (Auman, 2011). Literature supports that students have a positive attitude towards simulation games, thus, promoting the use of simulation games in education and teaching-learning (Vlachopoulos & Makri, 2017).

Significance of the Study

Teaching economics in higher secondary school is often said to be a very demanding and rewarding subject. The researcher believes that innovative teaching methodology might improve the academic performance of students. The study might be useful to other economics teachers with similar teaching-learning situations. The study would also provide room for other teachers to reflect and find an avenue to improve their teaching-learning practices (Choeda et al., 2018). According to the Bhutan Professional Standards for Teachers, all teachers are required to adopt a student-centred teaching-learning methodology with effect from 2021 (MoE, 2020).

Situation Analysis

Economics is offered as an optional subject in grades IX to XII in Bhutan. The researcher taught economics in grade XII since 2016 and it was observed that students performed poorly in economics in the BHSEC examinations. The researcher found that most students opt for economics in class XI and XII without learning any fundamentals of economics in grades IX and X. Generally, students who opt for economics from grade IX find it easier to understand economic concepts, facts, terms, and theories. This is because the majority of topics learned in grade XII are built on what has already been learned in grades IX and X.

The BHSEC examination 2018 and 2017 recorded the worst performance in economics (Rinzin, 2018; Rinzin, 2019a) with a national mean score of 45.53 in 2018 and 49.53 in 2017. In the researcher's higher secondary school, the mean score for economics in 2018 was 42.0 and 41.24 in 2017. The national mean score of economics in 2019 was 51.17. While the mean score for economics in the researcher school was 49.24. The quality of academic performance is measured by the mean score in examinations (BCSEA, 2020).

The researcher observed that many students study economics just from the prescribed textbooks, class notes and practice a range of past examination papers to prepare for the examinations. Although students attentively attend classes, their academic performance was poor. The researcher was concerned and decided to examine the issue and improve the academic performance of students. Thus, a simulation game methodology was used as an intervention programme to bring about improvement in student learning and academic achievements.

Competence

The researcher taught economics in grades XI and XII for four years. The researcher was deeply concerned with the poor performance of students in economics over the years. The researcher had attended a three-day workshop

on ‘Action Research’ organised by Dechencholing Higher Secondary School, Thimphu. The researcher referred ‘A Guide to Action Research: Enhancing Professional Practice of Teachers in Bhutan’, a publication of the REC, 2018 which provides practical guidance to conducting action research in education. The researcher also had the support of the school management and colleagues who have attended action research workshops at the school as well as at Paro College of Education in July 2018.

Critical Friend

According to Choeda et al. (2018, p.4) “the purpose of having a critical friend is to ensure that the researcher does not make narrow or biased interpretations of data”. One of the history teachers, a colleague at the same school served as a critical friend for the researcher. He has a sound knowledge of action research as he had studied action research at Paro College of Education during his training period. He had also attended workshops on ‘Action Research’ organised by the school. The researcher and the critical friend also reviewed the role of the critical friend as mentioned in the ‘A Guide to Action Research: Enhancing Professional Practice of Teachers in Bhutan’ by REC. The critical friend thus was clear about the role in the action research.

Literature Review

According to NCERT (n.d.) the concept of the simulation game is based on the concepts ‘simulation’ and ‘games’. For instance, “a simulation game is an educational activity which combines the features of both of a simulation (a working model of reality and active participation) and a game (rules, cooperation, and competition)” (Megarry, 1989; NCERT, n.d., p.85). Similarly, Wilson (1987) outlines simulation as an imitation of reality. It is the imitation of the real thing on a smaller scale. Under simulation, the participants carry out an exercise, which represents a real system, or a procedure, or a process, or parts of it. Simulation involves either mental skills or physical skills or both mental and physical skills. Simulations in education are often simplified or accelerated representations, which allow students to explore the situation. Megarry (1989) also highlighted the feature of simulation such as (i) simulation is an artificial situation based on reality or some of the components of reality, (ii) simulation provides a real learning environment for students and (iii) simulation involve students actively in the teaching-learning process.

Wilson (1987) defines a game as a competition, or exercise, played by adversaries within the rules, to win the game. Megarry (1989) supported this definition that a game is played by one or more players, cooperating or competing towards a definite objective with an agreed set of rules. According to NCERT

(n.d.), there are seven features of games: (i) Game is a purposeful activity and contain a set of objectives, (ii) game is carried out by the participants to achieve the predetermined objectives, (iii) game has certain rules to be followed by the participants during the activity, (iv) game is time-bound and has a time limit. (v) The game is played with active participation and needs cooperation among the participants. (vi) Feel of competition is always present among the participants. (vii) There is a scoring system in the game to declare the results. Simulation game as an activity that combines the players, rules, and competition with those of an imitation of reality (Wilson, 1987). Simulation game is a group-oriented approach to teaching. The role of the learning is active and the role of the teacher is that of a guide or a facilitator (NCERT, n.d.).

Simulation games involve role-playing with self-directed student participants. Under role-play, a participant needs to assume a realistic social role based on a common situation for interaction in the group. According to Megarry (1989) role-play refers to a group of techniques in which the participants are asked to accept a different identity, try to think their way into someone else's situation and perhaps into their mind as well. Killen (2009) argues that simulation is a broader term compared to role-play. Most simulations are rule-based activity whereas role-play gives more freedom to students to think and act in real life. However, both simulation and role-play can be viewed as an attempt to represent reality or a real situation without risks. According to NCERT (n.d., p.86), "simulation game often allocates different roles to the participants by issuing them with role cards bearing the name, age, and occupation of the person they are to represent". There are four features to role-play: (i) role-play require a profile describing the role behaviour to be performed during the game, (ii) a case study or scenario describing the situation in terms of which the roles are to be played or performed, (iii) a rule, specifying the conditions under which the game is to be played, (iv) to indicate how the winning and losing to be determined at the end of the game.

According to Vlachopoulos and Makri (2017) there are several advantages of simulation games in the teaching-learning process: (i) simulation games have increased the students' motivation to learn when the students' motivation is low due to socio-cultural factors and irrelevant curriculum that fail to connect the real-life experiences of the students. Simulation games make lessons active, interesting, and fascinating. The students are motivated by assigning roles, by dividing them into groups, and by stating the rules of the activity. Their level of interest increases because the student has a natural urge to play. Students become more eager in finding themselves in the activity of simulation games. (ii) Simulation games maximized the involvement of the students and their participation in the teaching-learning process. This method is helpful and relevant for the average students in remembering concepts and improvement of their academic achievement.

(iii) Simulation games require active participation and involvement of students. As a result, the motivation level of students increases and help to overcome misconception (Vlachopoulos & Makri, 2017). The students learn concepts, terms, facts, conventions, trends, principles, generalizations, assumptions, hypotheses, problems, and processes effectively and meaningfully.

The NCERT (n.d, p.87) states that “studies have shown that pupils who were taught economics through simulation games at higher secondary level scored more than pupils who were taught through traditional methods of teaching”. (iv) Simulation games help students to learn concepts with motivation and engagement. It enhances the retention level of the students. The students who were taught through simulation games had high levels of retention in comparison to those pupils who were taught through the traditional methods of teaching (NCERT, n.d). (v) Simulation games promote co-operation, team spirit, leadership, and respect for colleagues (Ahmad et al., 2013; Wang et al., 2016). Through simulation games, students become close to each other and strengthen their social relationships. Activities and group work under simulation games help the students to learn and share their knowledge and skills. (vi) The literature review also shows students who were taught through simulation games are more confident in expressing their views and ideas. NCERT (n.d., p.87) argues that the “clarity of concepts, increased interest towards the subject and being exposed to simulations make them more confident in dealing with real-life situations” and students become self-aware after activity (Vlachopoulos & Makri, 2017). (vii) Simulation games promote cooperative activity and group interaction. Social desirable habits such as tolerance, brotherhood, self-dependence, thinking for a common cause are fostered and enhanced. (viii) Simulation games also develop various life skills such as personality, decision-making, problem-solving, communication, and negotiations (Sarabia-Cobo et al., 2016). These life skills are necessary for the holistic development of the students. (ix) Simulation games promote the phase ‘learning as a by-product’. Students participate in the activity with excitement and fun, and enjoy more opportunities for learning (Ibrahim et al., 2011). But the purpose and objective of the activity under simulation games are to learn concepts, facts, and principles meaningfully.

There are various steps for designing a simulation game based exercise. According to NCERT (n.d) there are eight steps for designing a simulation game based exercise as detailed below:

(i) Formulation of instructional objectives - Formulation of instructional objectives is important steps for designing a simulation game based exercise. The objectives of the concepts to be taught must be written in behavioural form for student’s effective attainment.

(ii) Identification of simulation game - After the formulation of instructional objectives, an appropriate simulation game exercise should be identified. The component of concepts helps the teacher to identify the most suitable exercise to carry out in the class.

(iii) Preparation of simulation game - Teacher and student should prepare and complete their work related to the number of participants in each group, rules of exercise, roles, material required and arrangement of the furniture.

(iv) Assigning role among participants -The teacher assigns the role to the participants. The activity should go smoothly and be concluded properly. There are two types of roles among participants: (a) key role and (b) supporting role. The key roles have main and greater performance than the supporting roles in the simulation games.

(v) Observer - Students who do not participate in the activity should be assigned a different role such as writing scores, timekeeping, distribution and collection of material. The observer student should keep a complete record of work such as how they worked, what discussions were held, how roles and duties were assigned. The observer should mark constructive criticism of the work and note some important points for future references. Observers should learn equally with those students who were involved in the activity.

(vi) Organisation of simulation game - The whole plan of work is put into action. After the introduction of rules, the simulation game should be played.

(vii) Intervention - The teacher should provide constructive feedback in the progress of the activity as and when required. However, teacher intervention should be minimum to have a natural flow of simulation games.

(viii) Debriefing - This is the end stage where there should be general classroom discussions in which the students generalise their outcomes. The teacher should match the outcomes of the simulation game and the objectives of the lesson. The purpose of the activity should be expressed as not to entertain but to learn concepts, facts, and principles meaningfully.

Research Question

Do simulation games help students learn economic concepts, terms, and related economics information and enhance academic performance?

Methods

A pragmatic paradigm guided the study. The study adopted a mixed method

approach. The baseline data and post interventions data were collected through class test and class observations. Survey questionnaire was administered to find out students' feelings and attitude towards the three-week simulation games.

Population and Sample

A total of 27 grade XII students from one of the Higher Secondary Schools participated in the study. The student participants were selected through non-probability convenient sampling techniques. Of the 27 students, 22 students (13 girls and 9 boys) had not taken economics in grades IX and X. Economics subject is introduced to students in grades IX and X as a simple depiction of economic aspects closer to their real life. As students enter higher secondary school, economic theories, concepts, terms, facts, conventions, trends, principles, generalizations, assumptions, hypotheses, problems, and processes are introduced to students in abstract language. The student participants came from mixed socioeconomic status and gender within the age range of 18-20 years old.

Data Collection Tools

Class Test

The class test was carried out to collect both base line and post intervention data. The objective of conducting the pre-test (class test 1) was to find out the knowledge level of students through the analysis of test scores before the implementation of the simulation games. Pre-test was conducted on March 10, 2019, with a writing time of 50 minutes. The pre-test covered topics such as circular flow of income and national income. The questions consist of six short answer questions with a total of 20 marks. The total mark of 20 was converted to 100 for easy tabulation.

The post intervention test (class test 2) was conducted on June 1, 2019 to find out the students' level of performance in economics after the implementation of simulation games for three weeks. The questions for post intervention test were of similar standard to that of the pre-test questions.

The pre-test (class test 1) and the post-test (class test 2) were compared to examine academic performance before and after the implementation of simulation games. The pass percentage and mean mark of class test 1 and class test 2 were compiled and verified.

Class Observations

The second source of data was through classroom observations. Six rounds of observations were carried out during the entire period of the study. The three

observations were general on how students took part in the teaching-learning process. The purpose of the observations was to see the behaviour of the students before and after the implementation of the simulation games. Day to day anecdotal records were maintained for each student.

Survey

In order to find out students' feelings and attitude towards the three-week simulation games, a survey was administered to the entire class. The survey questionnaire consists of 5-Point Likert Scale - (5=Strongly Agree, 4=Agree, 3=Neutral, 2= Strongly Disagree, 1= Disagree). The survey data were analysed via mean, and standard deviation to determine the feelings and attitude towards the three-week simulation games.

Intervention

The poor performance in class test 1 (base line data) and the conduct of the students in the classroom (observations) revealed the need for an immediate intervention. Informed by the literature review, researcher adopted simulation games as an intervention strategy after identifying relevant topic. For three weeks, economics for grade XII students were taught using simulation games for a duration of 50 minutes every day except Saturdays and Sundays. Sample of the lesson plan is appended (Appendix A) herewith.

Data Analysis

SPSS version 24 was used to analyze class tests 1 & 2, and Survey data. Descriptive statistics were used to explain the quantitative data via percent, mean, and standard deviation. The narratives of the classroom observations were used to supplement data from class test. The data collected through the class tests, observations, and survey were triangulated to confirm the result and inform the discussion.

Ethical Clearance

The researcher informed the aim and objective of the study and sought the opinion of grade XII student participants. The students were briefed verbally about the planned study and its purpose to ensure proper usage. They were ensured anonymity and confidentiality and briefed on how the data was going to be used and protected. Parents' concerns were not asked as students were above 18 years old. The study was carried out as a part of the teaching-learning process. The researcher also sought permission from the school management to carry out the study. The critical friend and his role during the study were briefed to the class.

Findings and Discussion

The marks scored by the students during class test 1 were disheartening as evident from Table 1. The pass percentage was 54.2 and the mean mark was 42.6. The female students (mean marks=48.3) performed better in the test than their male counterparts (mean marks=36.9).

Table 1

Pass Percentage and Mean Marks in Class Test 1 (pre-test)

Student Participants	Pass Percentage	Mean Marks
Female	66.7	48.3
Male	41.7	36.9
Total	54.2	42.6

The narratives from the researcher's classroom observation records too revealed the issues and the challenges faced by the students in not performing well in the economics test (class test 1). For instance, majority of the students in the class were studying economics for the first time, they faced difficulties in understanding economic concepts, facts, principles, and theories. Further, the researcher's interactions with students revealed that the lessons were mostly teacher driven which is dominated by lecture method with a bit of demonstration, group work and PowerPoint presentations.

The observation data also showed that most of the students (40%) do not actively participate in the class activities. Few students had to be reminded constantly by the teacher to participate in the learning activities. Few students would discuss in private groups and engaged in private talks and not pay heed to the teacher's instructions. During the initial phase of study around 4% of students missed class on regular basis. These group of students resort to rote memorization without understanding the concepts, terms, facts, conventions, trends, principles, and generalizations.

However, 28.6% of students were found motivated and actively participated in the class asking several questions and sought clarification. These group of people did well in the class test too.

The post intervention data revealed a marked improvement in students' performance in economics as evident from the high mean marks in class test 2. For instance, the mean marks in the class test 2 increased to 59.44 compared to 42.6 in the class test 1 as reflected in Table 2. Similarly, pass percentage of students in the

class test 2 increased to 96.29% compared to 54.2% in the pre-test. Further, female students continued to fare well in the test. The overall performance and mean marks of students in the economics test increased after the simulation games. The results support that when students were taught using simulation games, students can score high marks in the class test.

Table 2

Comparison of Pass Percentage and Mean Marks of Economics in Class test 1 and Class test 2

Student Participants	Class Test 1		Class Test 2	
	Pass Percentage	Mean Marks	Pass Percentage	Mean marks
Female	66.7	48.3	100	63.66
Male	41.7	36.9	91	54.16
Total	54.2	42.6	96.29	59.44

Similarly, the observation data too indicated that simulation games were relevant in teaching-learning economics subject. The students actively participated in learning activities. The researcher also observed that class activities were lively, enjoyable, and responsive and students readily took part in learning activities without having to coerced or remind. A very wide variety of experiences were brought into the classroom through simulation games. The researcher's role became more of a guide, mentor and facilitator in the teaching-learning process.

The survey data also revealed that the students prefer simulation games strategy in the teaching-learning process as evident from a high mean score of 4.5 (Strongly Agree) as reflected in Table 3. The simulation games help comprehend concepts, hypotheses, and theories besides making teaching-learning interesting, enjoyable, and fun.

The triangulation of the data from class tests, observations, and the survey revealed the overall effectiveness of the simulation games as a strategy to learn economics. Class test 2 showed a significant improvement in the test scores of the students. The researcher observed that students actively participated in the lessons and shared positive things about the simulation games. The survey findings also revealed that students have a positive attitude towards the use of simulation games and recommended its use in the teaching-learning process in future. The findings confirmed the claims made by promoters of simulation games as an effective classroom tool NCERT (n.d.) and Vlachopoulos and Makri (2017).

Table 3*Learning Satisfaction Analysis*

Sl. No	Learning Satisfaction Level	N	Mean	Std. Deviation
1	Teacher engaged me actively and meaningfully	27	4.4	0.6
2	Simulation games methodology was helpful	27	4.7	0.4
3	I was encouraged to participate in the discussion during the group activity	27	4.7	0.5
4	Simulation games make learning interesting, enjoyable, and fun	27	4.8	0.4
5	I learn better with simulation games methodology	27	4.6	0.6
6	Simulation games made it easier to understand concepts, hypothesis, and theories	27	4.4	0.7
7	Simulation games promote cooperation, team spirit, collaboration, and respect for peers	27	4.6	0.5
8	Simulation games help us in developing important skills such as decision making, problem-solving, communication, and negotiation	27	4.7	0.5
9	Simulation games enhance my motivation to learn in the classroom	27	4.3	0.6
10	I get good marks in economics when simulation games methodology is used in the classroom	27	4.0	0.6
11	My academic performance improved after using simulation games	27	4.3	0.7
12	I recommend simulation games to teach class twelve students	27	4.7	0.6
Total average mean (Strongly Agree)			4.5	0.6

Reflection of the Study

The researcher felt good after the successful completion of the Action Research. The researcher gained better understanding of the teaching-learning process using simulation games although he learnt about simulation and role-play as a teaching strategy at the erstwhile National Institute of Education, Samtse during his PGCE programme.

The researcher also observed that the students reciprocated well when taught using simulation strategy. It empowers students' comprehension of lessons or topics as opposed to surface learning that requires only memorization and rote learning. The simulation games provide more insightful information than a textbook in delivering the lesson. Further, the use of simulation games improved retention and makes learning more entertaining.

The critical friend played an important role in helping researcher reflect and explore areas of his practice of the intervention. During the study process, the critical friend provided constructive suggestions, comments, provocative questions and feedbacks. The critical friend also helped researcher in recording observations, verifying survey questionnaire, review the standard of question papers for class test 1 and 2.

Although simulation strategy has the potential to engage students in deeper learning and make learning enjoyable and fun. However, there are certain shortcomings which the teachers need to be mindful of while implementing simulation strategy in the class. As Bhutanese teachers are assigned to teaching a minimum of 18 hours (22 periods) per week excluding other administrative and supervisory responsibilities, the researcher and his critical friend did not get enough discussion time for reflective enquiry. In simulation games, teacher workload increases. Teachers have to plan well before the implementation of the complete game. The simulation requires proper planning, execution, follow-up, and reviewing. It is also difficult for the teacher to identify the topic that can be taught through simulation games. The researcher also felt students were burdened with increased workload and responsibility within the limited time to complete the tasks. Overuse of simulation games in the teaching-learning process can be overwhelming and burdensome to students and teachers alike. Moreover, the Bhutanese curriculum is centralized and exam-oriented-emphasising assessment of learning and does not support student-centred learning.

Conclusion

The findings revealed that the students have a positive opinion of the use of simulation games in the teaching-learning process. The researcher observed that simulation games promote liveliness, interest, and learning for fun. By implementing simulation games, students' participation in the classroom increased and started to scored high marks in class test besides improving class attendance.

The researcher would like to recommend other teachers to incorporate at least four simulation games in the teaching-learning process (two before midterm and two after midterm examinations). Before the implementation of simulation games, the teacher should ensure that students have adequate experience with reality being represented. It is also important for the teacher to discuss the purpose of the activity with the students. There were few limitations observed during the implementation of simulation games as it requires more preparation time and energy for teachers, and all micro and macroeconomics concepts cannot be taught through simulation games.

The researcher recommends future researchers to replicate the same study with an extended intervention period and make a comparison and conclusion. The researcher also recommends Colleges of Education to carry out a similar study on the simulation games in the teaching-learning process in teacher education.

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Appendix A

The following sample lesson plan outlined in the NCERT (n.d. p.89-91) was implemented in the classroom:

Topic: Monopolistic Competition Market

Class: XII Arts

Time: 55 Minutes

Components of monopolistic competition market

- Many firms
- Closely related but differentiated product
- Free entry and exit of firms

- Selling costs

Instructional objectives

After going through this activity student should be able to:

- state the meaning of monopolistic competition market.
- list the features of monopolistic competition market.
- explain the features of monopolistic competition market.
- describe the terms “Product Differentiation” and “Selling Costs” [L]_[SEP]
- write the rationale of a firm in differentiating its product.

Rules

- Divide the whole class into five equal groups.
- There would be 5 students in each group.
- There would be four firms which will be selling their product “Toothpaste”.
- One group shall be consumers.

Procedure

- Three students of the first four groups will act as a seller of different firms which are selling their product toothpaste. Remaining two students of each group will perform promotional activities like advertisement on newspaper, T.V. and Radio, Free Sampling, etc. to sell their products. Their description is given below:

Table

Role of Students

Group	Role of Firm	Number of students	Student engaged in promotional activities	Total
1	Firm A Colgate	03	02	05
2	Firm B Pepsodent	03	02	05
3	Firm C Close up	03	02	05
4	Firm D Dabur	03	02	05
Total		12	08	20

It is clear from the above table that there are five students in each group engaged in performing roles of firms and engaged in promotional activities.

The fifth group will act as consumers who wish to purchase a product “toothpaste” and for this, they visit and interact with the members of each firm and observe all the promotional activities. The group of consumers will get information related to price, quantity, quality, brand name, colours, type of service etc. about the products.

Debriefing

After the activity has been conducted, the groups will share their experiences and explain the purpose of the activity. At this stage, the teacher needs to match the outcomes of the activity with the objectives of the lesson and describe that there are a number of firms selling a similar product and thus, each firm supply a certain percentage of the total supply of the product. Competition prevails in the market because there are many firms. Products of different firms are close substitutes of one another. They can be differentiated from each other based on a brand name, colours, shape, quality, and expenditure incurred in promoting sales of a firm etc. Finally, the meaning of monopolistic competition is derived with the help of students as it refers to a market situation in which there are different firms selling closely related but differentiated products.

Homework

Q1. Give four examples of any five consumer goods industries where product differentiation is prevalent.

Q2. Can a seller in monopolistic competition market influence price? Give one reason.

Q3. Explain any four features of monopolistic competition market.