



CENTRAL ASIAN JOURNAL OF ARTS AND DESIGN

Journal homepage: <https://cajad.centralasianstudies.org>



Group Dynamics and Instructional Design

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Abstract

Instruction is communication deliberately planned to broaden the knowledge of the learner. It is carried out to help people learn. It is deliberately planned by analysing the learning needs of the individuals involved, developing instructional content, materials and activities, and evaluating them to ensure that they meet the needs and characteristics of the learners. To be able to plan appropriate instruction, it is important to study the dynamics of the groups on which instruction is applied. This paper looked at group dynamics and its application on instructional design. Some of the ways in which group dynamics affects instructional design is in determining the group size, allocation of time, choice of instructional strategies and media, managing conflicts.

ARTICLE INFO

Article history:

Received 15-Feb-2023
Received in revised form 10 Feb
Accepted 16-Mar-2023
Available online 29-Apr 2023

Key words: Instruction, materials, dynamics, design, group dynamics

Introduction: One of the major problems plaguing the field of educational technology, according to Gustafson and Branch (2002) is inconsistent use of terminology. This situation is not restricted to the field of educational technology alone. It is applicable, generally, to the use of most concepts. Just as people differ, their use of various terms and concepts also differ. This is also applicable to the definition of education. Definitions of education abound. A survey of the writings of various professionals in the field of education would provide as many definitions as the number of people concerned. In the case of education, however, in spite of the numerous definitions, there is an agreement as to the origin of the word. The term 'education' is gotten from two Latin words 'educere' and 'educare'. The first word 'educere' means to draw out, lead out or bring out, while the second word 'educare' means to nourish, bring up or raise (Osokoya, 1989). So, whatever the definition of education given by various people, there is a consensus that education can be said to mean leading or drawing out knowledge and skills of an individual and creating an enabling environment to nourish these skills and knowledge in order to

E-mail address: editor@centralasianstudies.org

(ISSN: 2660-6844). Hosting by Central Asian Studies. All rights reserved..

attain the desired potentials.

In traditional societies, the business of leading out and nourishing the knowledge and skills of the individual was the responsibility of parents, siblings and every member of the society. In this situation, because the process of educating individuals was not planned, people were instructed in most cases because a situation arose that necessitated such, and in doing this instruction was mostly carried out on individual basis (Fafunwa, 1974). This is not the case in most education in modern times. In modern society, education is deliberately planned and takes place in schools with classrooms and a structured classroom situation. In modern culture and society the business of education the child is left mostly in the hands of professionally trained personnel known as teachers (Osokoya, 1987). The teacher plans the instruction and delivers it or involves his learners. The teacher might be or not be physically present.

Information is instruction that is deliberately planned to broaden the knowledge of the learner (Gagne & Briggs, 1989). It is a set of events that affects learners in a way that there is a resultant change in the behaviour in a desired direction. In order to do this, instruction has to be planned taking the target audience – the learners – into consideration. The learning environment, strategies and media also has to be considered. Taking the learners into consideration is important because in modern society there is usually more than one learner. A great deal of the instruction that takes place in our schools involves learners assembled in groups (Gagne & Briggs, 1989). Thus, it is important to know what groups there are and how they function. In doing this, we are talking about groups and group dynamics. The purpose of this article is to look at groups and how they affect the instruction we design.

Groups

A group is any number of two or more people with similar norms, values and expectations who interact with one another on a regular basis. It is a formation of two or more people who come together for a given purpose, communicate with each other, affect each other and are dependent on each other. A group is not just any collection of people who are gathered together at a particular place. For instance, a stadium may be full of people seated closely together. This does not mean they are a group. To be a group they need to have similar norms, values, characteristics and interact regularly with each other (Schaefer, 2003; Gencer, 2019). There are several types of groups. They are as follows:

a. **Primary Group.** This is a small group which is characterised by intimate face-to-face association and co-operation (Schaefer, 2003). They are groups whose members share close, personal and enduring relationships. They are groups that are marked by concern for each other, shared activities and culture, and long period of time spent together (Devore, 2022). These groups can be instrumental to the day-to-day existence of an individual. They play a major role in the socialisation process and in the development of personal identity roles and status. This is because members usually have a direct ‘face-to-face’ contact with each other for mutual help, companionship and discussion of issues. They frequently engage in activities together and have a shared culture. In most situations that we find ourselves identifying closely with a group, it is most probably a primary group. Examples of primary groups are family, childhood friends and highly influential social groups such as sports and academic groups. These are primary groups and are usually formed early in life (Forsyth, 2009; Shah, 2022; Crossman, 2019).

b. **Secondary Group.** This is a formal group in which people interact on a less personal level than in a

primary group. It is an interpersonal group with little social intimacy or mutual understanding. The group is not characterised by a close bond of friendship and the relationships are usually temporary (Boundless Team, 2022; Schaefer, 2003).

c. **Reference Group.** A reference group is any group that individuals use as a standard for evaluating themselves and their own behaviour (Schaefer, 2003). It is a group that an individual looks up to and wants to emulate. The attraction of this group is so strong that individuals tend to imitate them in dressing, language, attitude, and so on. They are a group that an individual wants to relate to and adopt goals and values from. An example of this group is professors in an academic environment; authors, musicians, actors/actresses.

d. **Dyad.** This is also called the two-person group (Gagne & Briggs, 1989; Schaefer, 2003). This is the smallest type of group available. It is a group made up of only two persons. Examples of this type of group are a husband and wife group, a singing duo and a 2-man business partnership (Schaefer, 2003). In this type of group decisions are jointly made by the members of the group. The opinions of the members have effect on decision making and group activities.

e. **Small Group.** Small groups are groups that are made up of three to eight members. They are groups that are small enough for all members to interact simultaneously and get acquainted with each other. They interact about a common issue or independent goal and can exert influence over one another (Wilson & Hanna, 1990). In such groups discussions are possible among members and the performance of individuals is affirmed or corrected by other members of the group (Gagne & Briggs, 1989). In the school system, when teachers want group activities, they usually divide the class into such groups for greater effectiveness.

f. **Large Groups.** These are groups that are made up of 15 or more persons. There are also very large groups. These are groups that are made up of a hundred or more persons. The types of classes in most public secondary or tertiary schools in Nigeria fall into this group.

Group Dynamics.

There are several types of groups. Some of these have been discussed. While the types of groups that are put forward by Charles Horton Cooley have implications for sociologists, teachers and instructional designers are more interested in the second set of groups that relate to size. Modern trends, particularly, favour small groups (Slavin, 2000). This is also the concern of the field of group dynamics. It is the relationship between learners in a group and the impact this has on the way they work. Group dynamics is defined by different people in different ways. Chand (2021) defines it as the forming, structure, behaviour, processes, interaction and forces operating in groups and how they function. This definition is similar to that of Barnett (2021) who says it refers to the attitudinal and behavioural characteristics of a group, and says it is concerned with how groups form, their structure, process and how they function.

Business Jargons (2022) define group dynamics as the process where in the attitude and behaviour of members influence the behaviour of other members of the group, either by choice or circumstances. It says it is part of social psychology that deals with the development and change in the

overall structure and function of the psychological groups into self-directing ones. It says group dynamics is associated with groups, thus, when a group exists, the members will interact, change and adjust themselves according to the changing circumstances and their relationship with each other.

Plans, (2020) describe group dynamics as how groups and group members act and react to dynamic circumstances such as changes, interactions and forces operating within the group in a social organisation. Mind Tools (2020) describe it as the effect of the distinct roles and behaviour people take when they work in a group and their effect on other group members and the group as a whole. It is the internal nature of groups, their formation, structures, process and the way they affect individual members, other groups and the organisation as a whole.

Irrespective of the definition, however, it is important to note that the field of group dynamics is primarily concerned with small group behaviour, how they are formed, interact and influence each other. The emphasis on small groups has come about as a result of its effect on learning and in the work place. Some of the reasons for the emphasis are the following (Schaefer, 2003):

- i. It ensures interaction in a direct and intimate manner.
- ii. There are more opportunities for individuals to contribute to the activities of the group.
- iii. There is the tendency for every view point to be heard because members have more time to speak than in a large group.
- iv. It is more difficult to ignore certain members or viewpoints in a small group. Thus, there is the tendency for every viewpoint to be heard because each member has more time to speak or participate.
- v. It is easier and more appropriate to practice in small groups in a laboratory environment.
- vi. Identity of individuals and their effect on society is better revealed in small groups.

Formation of Groups

Small group formation is a predictable flow of behaviour that occurs when a collection of strangers are put together in a restricted space or environment (en.wikipedia.org). The tendency is that when this is done, like in a classroom or work place, people will naturally tend to interact with other people. At the beginning people will gather in two (dyads) and threes (triads) to discuss the purpose of the gathering. Gradually these groups break up and re-assemble with other people until people with similar characteristics, norms, values and expectations would find themselves together on a regular basis. As they interact they tend to pass on their way of thinking and acting to each other. This could be language, values, dressing or leisure activities (Schaefer, 2003). They influence each other and also help each other overcome problems and weaknesses.

The process of formation of groups is not usually a smooth one. It is not a process that is undergone without conflicts. Some of the conflicts and disagreements that occur are as a result of norms and values, differences in sub-goals and the means of achieving them, differences in choice and allocation of resources to achieve goals, fight over reward, punishment and roles in the group.

Stages of Group Formation

There are several stages of group formation (Tuckman, 1965; Araf, 2020). They are as follows:

- a. **Forming**. This is the first stage of group forming. At this stage members of the group are cautious in their speech and attitude towards each other. They pretend to get along with each other and so ignore or accept the behaviour of others.

b. **Storming.** At this stage, members are less cautious of their speech and attitudes towards each other because each member is trying to assert himself as a bona fide member of the group. Here, members let down their cautiousness and politeness barriers and try to get down to the real issues of the group. This usually results in tempers flaring up and shouting bouts as each person tries to assert his view or decision.

c. **Norming.** At this stage, members of a group have started to develop respect for each other. They have reached a stage where they are beginning to get used to working with each other. It gets to such a level that they are actually concerned about the absence of each other from a class or an activity. This leads to trust and productivity because they have an understanding of the values or attitudes of each person and can accommodate such.

d. **Performing.** At this stage members of a group work together to achieve a common goal on a highly efficient and co-operative basis. Instead of quarrelling regularly about roles and so on, they are all aware of their role in the group and how best to go about it in order to help achieve set objectives.

e. **Adjourning.** At the end of an activity which brought the group together, the group is dissolved. This stage, which is also known as the mourning stage, is the end of the group. In groups that have worked well together to achieve their set goals, this is a difficult stage. This is because they have gotten used to working together, and sometimes, actually miss the faults and weaknesses of other group members that would have caused irritation at the beginning. At this stage the group resorts to some form of closure rites and rituals suitable for the event. This is used to exhibit emotional support or celebration of their success. A group that does not achieve its objectives usually does not get to this stage. Permanent groups that function for a long time do not also get to this stage (Swarthout, 2021).

g. **Blocking.** This is a stage that occurs with unsuccessful groups. This is the process of disrupting the flow of information or interaction of the members of a group. It happens when the behaviour of team members disrupts the effectiveness of a group (Mind Tools Content Team, 2022).

Dynamics of Group Formation

The dynamics of group formation has to do with the reasons for group formation. Also known as theories of group dynamics, this refers to what makes people form groups. There are many reasons for group formation. Some of these are as follows (Luthan, 2001; Long-Growell, 2021):

a. **Propinquity.** Propinquity is the proximity or physical closeness of one person to another. People form groups because they find themselves regularly seated close together or within a particular geographical proximity. When people seat close together there is the tendency that they get to talk and do things together from time to time. With time they get to learn the likes and dislikes of each other, the abilities and weaknesses of each other and when or how they can be of assistance to each other. This is what happens in classrooms and offices where people have regular positions they stay for a number of weeks or months. The more the degree of propinquity the more likely people will be attracted to each other and become friends (APA Encyclopedia of Psychology; Long-Crowell, 2021).

b. **Cooperation and Problem-solving.** People have the tendency to bond when they have common problems. Students who realise they have problems in carrying out a particular activity over and over,

for example, would try to get together to find a solution to the problem.

c. **Balance Theory.** This dynamic of group formation says that people in a crowd with similar attitudes towards an object or goal that is relevant to them would get together with time. People form groups or become a group when they have similar attitudes and groups.

d. **Exchange Theory.** In this dynamic of group formation the driving force of the interaction is a reward that is expected. If people know that they would get a reward at the end of an activity they would get together to work and perform the necessary task in order to get the reward. For example, if a group of students know that they would be awarded some marks in a subject if they got together to do something well, there is the tendency that they would put aside their individual differences or dislike for each other.

e. **Homans' Theory.** This theory of group formation states that people who constantly partake in common activities are likely to form groups. Examples are women who constantly attend maternity clinic together; parents picking their children at school regularly and professionals attending workshops and conferences together (Chand, 2022).

Factors That Affect Group Dynamics

There are many factors that affect group dynamics. Some of these factors are discussed here. They are as follows:

a. **Leadership.** Leadership is the ability to direct, guide and influence the behaviour, activities and work of other people to achieve a goal. It is a process of social influence that maximises the knowledge, abilities, competencies and skills of others to achieve a goal. It has to do with having influence over other people by interacting with them in order to guide them to attain a purpose. It involves moulding and shaping the behaviour of a group towards the accomplishment of a goal. It is the role of the leadership to transform complex situations and activities into small and simple pieces for better understanding (MSG Content Team, 2022; Kruse, 2022). Leadership is not gained as a result of seniority, hierarchy, titles or personal attributes. Leadership belongs to people who have the ability to inspire followers because it is a position that binds groups together.

Leadership has a lot to do with group dynamics. The capacity and ability of a resourceful leader can make a group that does not have enough motivation become engaged in creative activities, just as an unimaginative leader can kill the progress and creativity of his group. Thus, the classroom teacher needs to know his own strength and how he can affect the working of his group positively or negatively (Peralta et al, 2021).

b. **Cross-Cultural Influences.** Culture is the way of life of a people. The way of life of a people is influenced by their environment, history, religion, and so on. It affects our behaviour and interaction with people. Cross culture is the effort to ensure that all people in an environment interact effectively with people of other backgrounds. Cross-cultural influence, also known as intercultural differences, involves the perception, interpretation and understanding of an issue from diverse ethnic, generational or social classes. When people of different cultures make up a group, they are bound to read situations with the view of whatever their culture is. Western cultures requires an individual to stare into the eyes of the person he is speaking with, while African culture see that as rude, especially if involves a child

and an adult. It expects the child to look away. To a Christian, marrying more than one wife is a sin, but this is acceptable with Moslems and traditional African worshippers. A Yoruba child and a child from Rivers state would see respect in two different ways because of their varying cultures. When a 70 year old man is given a topic to research, his most likely inclination would be to go to the library or look for books. If the same assignment is given to a teenager in 2022, where do we think he will go to? The Internet is where he will go.

Cross-cultural influence can be beneficial or detrimental to a group. It is beneficial when there is cultural sensitivity. This is when there is regard and respect for the way of life of other people in a group. It is detrimental when there is ethnocentrism (Pearson and Nelson, 2000). This is the tendency to view other cultures as inferior to one's own. This is harmful, hurtful, dangerous and prevents the bridging of gaps in a group. Imagine a situation where the 70 year old and the teenager are in a group. There will be clashes at the beginning, but with good communication and leadership, they will learn from each other. This is cross-cultural influence (Heiskanen, 2012; Kopp, 2021).

c. Communication skills. Communication is the exchange of information between two or more persons. It is the exchange of information, ideas, thoughts, opinion, faith, belief, attitude and emotions between persons. It is the exchange of information by speaking, writing or using some other medium like telephone, computers and television. It is the sharing and understanding of meaning. For group dynamics to be effective there has to be sharing and understanding of the meaning of information exchanged (College of DuPage Digital, 2022; Omieibi-Davids, 2021).

d. Group Cohesiveness. Also known as Social Cohesion, it is the extent to which members are involved in the activities and objectives of the group. It is the bonding of group members and their desire to remain part of the group. It is the forming of a united front. It is the quality of being organised in a united way with strong and close internal connection between people, ideas and other elements (Paulus & Dzindolet, 2011; Pearson & Nelson, 2000; McMillan, 2022). It is the degree to which members enjoy collaborating with other members and are motivated to remain in the group to the end of the activity or situation that has brought them together (MacPherson & Howard, 2011). Group cohesiveness is important for effective group dynamics because it ensures that the members of the group work together to achieve the necessary goals. When there is cohesiveness there is a reduction of blocking by members that could result in disruption of communication (Araf, 2022).

e. Group Resources. The resources of the group go a long way to determine whether group dynamics is effective or not. These are the knowledge, abilities, skills and personality of the various individuals that make up a group. When people from different backgrounds work together collaboratively they come with a wealth of experience that an individual working alone cannot dream about. These experiences could be from their various cultures, age, physical dexterity and environments.

f. Group Structure. This is the layout of a group. It is the arrangement of all the interrelated part of the group. It involves the pattern of organisation or the rules that define the group. It defines the feature, functions of the members and their relationships. This includes the size, the status, the roles and the norms. The size is the number of people in a group. It has an impact on the functioning of the group. When the size is small every member of the group can sit in a way to have eye contact and have defined

roles that they all play. This is not so with large groups. In large groups it is easy for members to avoid being part of discussions and group activities, especially when there is limited time for such activities (MacPerson & Howard, 2011; Forsyth, 2012). The Status is the position given to every member of a group. The status of the members is attached to certain duties and responsibilities which are their roles. The norms are acceptable standards of behaviour that are shared by the members. Some of these include things like letting other members contribute to group discussion without shouting them down or being rude, respect for the views of others, abiding by group decision, and so on. This has impact on group dynamics and achievement of goals or otherwise. It can lead to **group shift**, a phenomenon where individuals allow their views to be taken over by exaggerated group decisions. It can also lead to **social loafing** where group members stop putting in effort in the group activities because they believe their views do not matter.

Implications of Group Dynamics for Instructional Design

Instruction is communication deliberately planned to broaden the knowledge of the learner. It is a human undertaking whose purpose is to help people learn. It consists of a set of events that affect learners in a way that there is a change in their behaviour as a result of the activities they are exposed to (Gagne and Briggs, 1989). Some of these activities that constitute instruction are teaching, reading a book, watching a television programme and so on. While learning can take place without instruction, the effect of instruction on learning is often beneficial and easy to observe. This is because instruction is deliberately planned to achieve various objectives. This creates a shortcut to facilitate learning (Omiebi-Davids, 2021).

When instruction is deliberately planned to achieve a particular purpose, what is involved is instructional design. Instructional design, also known as Instructional system design or Instructional systems development (ISD) is the process of analysing the learning needs and goals, and the development of a delivery system to meet those needs. It includes the development of instructional materials and activities, and the try-out and evaluation of all instruction and learner activities (Instructional Design Central, 2022). It is the practice of arranging content and media to facilitate learning. It involves determining the current state of the learners' understanding, defining goals of instruction and creating a media-based intervention to assist instruction based on some pedagogically tested theories of learning.

Instruction in the school system is most often carried out groups. Trends in education focus on learning strategies that focus on small group instruction. To be able to develop appropriate instruction to meet the demands of the time, therefore, it is important to have knowledge of the dynamics of groups. Group dynamics has a lot of implication for the instructional process. Thus, in designing instruction the teacher needs to take the formation of groups, the dynamics of group formation and the factors that affect group dynamics into consideration. Some of the ways these affect the instructional process are as follows:

Effective Leadership. Knowledge of group dynamics reinforces the role of effective leadership in the instructional process. There are two leadership positions in group dynamics in the instructional process

- the teacher and the group student leaders. This reinforces the importance of the teacher in the learning situation because the teacher is the leader of the instructional process. In spite of the emphasis on constructivism which allows learners generate their own knowledge and encourage collaboration and cooperation among learners, the teacher is required to provide leadership. Knowledge of group dynamics also makes it possible for the teachers to look for the appropriate characteristics in group leaders, whether they are chosen by him or the various group members (Mind Tools, 2022; Weimer, 2013). The teacher determines the membership of the groups based on the emphasis of a particular study unit. If the purpose of a particular lesson is to help academically weak students, then the teacher would pair academically weak and strong students and use cooperative learning techniques that would accentuate this. If, on the other hand, the purpose is to encourage cross-cultural integration, he would put together students of similar academic abilities to discourage ethnocentrism. The teacher's leadership role also includes appointing student group leaders, giving guidelines on the functioning of the groups, checking the cohesiveness of groups, checking overbearing group leaders/members and preventing feuding and blocking. It is the role of the teacher to inspire and instil confidence in his students.

The student group leaders play an important role in the instructional process. They lead the activities of the group and guide the group to achieve desired objectives. They determine the roles and responsibilities of the members of his group, determines the amount of time to spend on various activities, when and where group members meet, and help the group to come to an agreement to present as their group work.

Learner Homogeneity. The knowledge of group formation is important in the design of instruction. It informs the teacher or instructional designer that for people to work together effectively in a group they need to have similar characteristics, norms, values and goals. Thus, as instructors or instructional designers, we should consider these characteristics and design instruction that would suit our learners. If we design instruction that does not fit their characteristics and goals, then our instructional process would not achieve what we have set out to achieve.

Cohesiveness. Cohesiveness is a factor in group dynamics. The tendency in group dynamics is that the more cohesive a group is, the more the chances of attaining the goals of the group. The knowledge of group dynamics makes it possible for the teacher to identify groups that are cohesive or otherwise and to take measures to see that problems that would cause blocking are nipped in the bud. It makes it possible for the teacher to pre-empt problems early and look for solutions to prevent or stop them (Paulus & Dzindolet, 2011; Araf, 2022)).

Allocation of Time. The knowledge of group formation helps us to determine the amount of time we would allocate to our learners to achieve set objectives while working in groups. Unlike is the case with an individual who would go straight to carrying out whatever activities he or she is required to achieve expected set objectives, the group would first have to learn to work on their differences before coming together to work effectively as a group. The effect of this is that it takes extra time to bond. Thus, in planning instruction for our learners this has to be taken into consideration.

Group Size. The knowledge of group and group dynamics is also important. It informs the teacher on the number of people we should allow to work as a group in order for the group to be effective. This,

according to Schaefer (2003) should not be more than 15 persons at any particular time. In most situations, it is necessary to keep it between 2 and 8 persons, but whatever the case, it should not be more than 20. This is necessary if we want members to interact properly in group activities. The number of people that are put in a class project should not exceed 6 (Awotua-Efebo, 1999; Elliot et al, 2002). This is also the emphasis of designers of instruction and instructional packages, so most recent innovations in classroom teaching are based on small group teaching (Penuel et al, 2007).

Maintaining Discipline. When a group does not function properly together there is likely to be very little work done in achieve desired objectives. There is likely to be distrust and confrontation (Awotua-Efebo, 1991; Forsyth, 2009). This knowledge is important in maintaining discipline in the classroom situation. To prevent feuding and disruptive learners from disturbing class activities, the teacher can put such learners together in a group to compete with other groups for a reward. In order to work well the teacher in cooperation with the learners would have to lay down some rules that every group would abide with in order to get the reward. The desire to get the reward would encourage such learners to cooperate in order to achieve their common goal which is to get the reward.

Choice of Instructional Strategy and Media. Group dynamics helps the teacher to determine the instructional strategy and media used for his instruction. These have to be methods and materials the characteristics of the group would allow. For a group of learners with good musical acuity, the teacher would know how to present himself. This will be quite different from how he presents himself to a group of students with no musical acuity.

Managing Conflicts. Dealing with groups that have to cooperate and collaborate to learn can be more problematic than teaching a full class of students who sit quietly and listen to the teacher. There are usually clash of personalities and cultures. It is quite easy to give up on such collaborative lesson. The knowledge of group dynamics makes the teacher realise that such conflicts area normal beginning for groups and can be overcome. This knowledge lets him realise this and arms him with how to handle it by creating positive circumstances to motivate the learners to continue to work together as a group (Araf, 2022; Heiskanen, 2012; Kopp, 2021).

Conclusion

Group dynamics plays a major role in the instruction we design as teachers and educators. It determines our choice of methods, materials, activities and evaluation techniques. It also determines what the teacher does in the classroom. It has also contributed several innovative methods to the instructional process, like the cooperative learning strategies.

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