

Development of the Intrinsic Motivation Scale for Students

B. Annapoorani
Assistant Professor
Stella Matituna College of Education
Chennai - 600 083
Tamilnadu, India

Dr. S. Chamundeswari
(Corresponding Author)
Principal,
N.K.T. National College of Education for Women,
Chennai-600 005,
Tamilnadu, India.

Abstract

Intrinsic motivation refers to behavior that is driven by internal rewards. In other words, the motivation to engage in a behavior arises from within the individual because it is naturally satisfying to him/her. This contrasts with extrinsic motivation, which involves engaging in a behavior in order to earn external rewards or avoid punishment. Rewards can reinforce and at the same time forestall young children's willingness to learn. However, they are broadly used in the field of education, especially in early years, to stimulate children towards learning activities. This paper reviews the theoretical and research literature related to intrinsic motivational theory. The purpose of this article is to discuss the impact of intrinsic motivation on the learning process of students and to develop a tool to assess the intrinsic motivation, one which suits the present Indian conditions.

1. Introduction

Intrinsic motivation is an energizing of behavior that comes from within an individual, out of will and interest for the activity at hand. No external rewards are required to incite the intrinsically motivated person into action. The reward is the behavior itself. Logically, this seems like an ideal, for people to act as "origins" of their behavior rather than "pawns" (deCharms, 1968). However, it is certainly not the case that every real world behavior stems from an intrinsic energy. Intrinsic motivation is an important topic in education. Teachers and instructional designers strive to develop learning environments that are intrinsically rewarding. Unfortunately, many traditional paradigms suggest that most students find learning boring so they must be extrinsically goaded into educational activities.

Schools are of particular interest when it comes to intrinsic versus extrinsic motivation, particularly because of the different outcomes that researchers have shown to result from intrinsic motivation: more interest, excitement, confidence, enhanced performance, persistence, creativity, self-esteem and general well-being (Deci and Ryan, 1991; Deci and Ryan, 1995; Ryan, Deci and Grolnick, 1995; Sheldon, Ryan, Rawsthorne, Ilardi 1997; Ryan and Deci, 2000). Over the years, several theorists have offered insights into the phenomenon through their conceptions of intrinsic motivation. The factors they identify as increasing intrinsic motivation include:

- **Challenge:** People are more motivated when they pursue goals with personal meaning and when attaining the goal is possible but not necessarily certain. These goals may also relate to their self-esteem when performance feedback is available.
- **Curiosity:** Internal motivation is increased when something in the physical environment grabs the individual's attention (sensory curiosity). It also occurs when something about the activity stimulates the person to want to learn more (cognitive curiosity).
- **Control:** People want control over themselves and their environments and want to determine what they pursue.
- **Cooperation and competition:** Intrinsic motivation can be increased in situations where people gain satisfaction from helping others. It also applies to cases where they are able to compare their own performance favorably to that of others.
- **Recognition:** People enjoy having their accomplishment recognized by others, which can increase internal motivation.

2. Need for the Study

Deci and Ryan (1975) acknowledge that even when a school environment supports autonomy and competence, if a person is simply not interested in a particular learning activity, he will not be intrinsically motivated for engagement (2000). Rather, he will be motivated by external factors like grades. However, according to Deci and Ryan (1975), external motivations can be internalized. Despite his/ her lack of interest, a person can still be self-determined if he/ she can integrate the activity into his/ her sense of self. The shift in motivation can only occur when teachers respectfully acknowledge students' feelings about the activity rather than try to scare, pressure or guilt them into compliance. They add that teachers must also explain the reasons behind the activity's importance, demonstrate how the activity relates to the students' lives, and ensure that pupils have the necessary skills to succeed (2000).

Thus, according to Self-Determination Theory, intrinsic motivation is dependent on the interaction between different individual perceptions of the environment and different perceptions of

the self. Interests, amounts of challenge, appropriate skills, feelings of competence, and choice in the classroom are all things that can potentially affect the intrinsic/extrinsic balance.

3. Theoretical Framework

One of the most widely cited contemporary theories of intrinsic motivation is Self-Determination Theory (SDT), developed by Deci and Ryan (1975) states that humans have three innate psychological needs: a need to feel competent, a need to feel related and a need to feel autonomous. Intrinsic motivation develops out of the support of these needs. When people feel competent, autonomous and self-determined, they will freely seek what interests them. Intrinsically motivated learning can only occur when an individual feels freedom to make choices in the process, when the activity is challenging, and when the challenge can be conquered. Whether these conditions are met depends on the person as well as the environment. After all, different circumstances afford different perceptions.

Individuals can perceive specific events as informational (preserving a sense of competence and freedom), controlling (conveying a pressure to think, feel or behave a certain way), or motivating (conveying personal incompetence and a sense that particular outcomes are impossible to achieve). Further, the environment in general can contain any mix of elements that could be defined as autonomy supportive, controlling or a motivating. For example, a teacher may allow her students to choose the books they read for reports (autonomy supportive), yet remind them that they will be evaluated and should strive for high marks (controlling). After the assignments are turned in, she could opt to grade on a curve, opening up the possibility of equal student efforts leading to differential outcomes (a motivating). The ultimate effect of the person/environment fit depends on the saliency of each element to the individual. If a person perceives his/ her environment as informational and feels competent and autonomous, intrinsic motivation can be sustained and/or enhanced.

4. Development of the Tool

Motivation is termed as the stimulation that drives an individual to bring about a change or perform certain behavior for his or her own internal satisfaction or pleasure. The act of being motivated by internal factors to perform certain actions and behavior is called Intrinsic Motivation. In terms of Education, this would mean that students are motivated to study and engage in course work because it stimulates them instead of simply completing as an assignment to receive a good grade. Teachers trigger their motivating factors to maximize their academic performance. The Self-determination theory dwells on the motivation behind the choices people make without any

external influence and interference. This theory focuses on the degree to which an individual's behavior is self-motivated and self-determined (Deci and Ryan, 2000).

Psychologists argue that one can be intrinsically motivated only if the person feels autonomous and competent. In other words, an intrinsically motivated person is invariably competent at her task and has autonomy, or control over it. A third yet important component necessary for intrinsic motivation is having satisfying relationships with people.

Autonomy refers to acting with volition and with a sense of choice and freedom to discern the right choice. Deci (1971) found that offering people extrinsic rewards for a positive behavior that is intrinsically motivated undermines the intrinsic motivation as they grow less interested in it. Encouraging autonomous behavior in students can enable them to choose prudently and have confidence in the choices they make.

Another important dimension of Intrinsic Motivation is Competence. Competence refers to the perception that the individual has of his/her effectiveness in a given task, because these feelings of competence allow for the satisfaction of the task they accomplish (Ryan and Deci 2000) as that the individual is competent in performing a task.

Finally, according to the Self-Determination Theory, Relatedness is defined as an individual's feeling of support and affection that one might give and receive from interactions with others. (Ryan and Deci, 2000). Relatedness also refers to the will to interact, be connected to, and experience caring for others (Baumeister and Leary 1995).

According to Filak and Sheldon (2003) allowing students to learn in their own way (Autonomy) by providing them with opportunities to succeed (Competence) and by defusing or removing authoritarian barriers (Relatedness), instructors can give their students an interesting, challenging and intrinsically motivating educational experience.

Based on the Self-Determination Theory and other studies, the dimensions for the Intrinsic Motivation Inventory developed for the present investigation have been finalized as Autonomy, Competence and Relatedness. Initially, 63 statements were prepared pertaining to intrinsic motivation encompassing three dimensions: Autonomy, Competence and Relatedness. The items were subjected to expert judgment and every item was required to be relevant to the content and criterion of intrinsic motivation. Experts were requested to content validate the items in the scale. This was done with a view to establishing the content validity of the scale items. On the basis of the opinion and comments of the experts, 2 items had to be reframed and 8 were deleted for

overall ambiguity. The final Intrinsic Motivation Inventory constructed by the investigator consists of 55 items, 29 items pertaining to Autonomy 17 items pertaining to competence and 9 items pertaining to Relatedness. The items under each dimension are shown hereunder:

Dimension	Items
Autonomy	1,2,5,10, 12,15,16,19,21,22,23,27,29,30,31,32,33,34,35,39,40,42,43,45,46, 48,49,50,52
Competence	6,7,11,14,17,18,20,24,25,26,28,41,44,51,53,54,55
Relatedness	3,4,8,9,13,36,37,38,47

The scale has been constructed on a Likert Scale with five alternatives, namely, Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. Further the tool was subjected to Confirmatory Factor Analysis for the purpose of standardization. The Confirmatory Factor Index (CFI) was found to be 0.82 and the tool was thus standardized.

Administration

The test was administered as an Individual test for students. The investigator tested 10 students at a time belonging to secondary level. The time taken to complete the test was 15 minutes and the subjects were comfortably seated and the following instructions were given.

Listed below are a series of statements that tests the intrinsic motivation of students. Please read the following statements one by one carefully. Each statement can be responded in 5 alternatives viz., Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. According to your view, think and decide which alternative suits you well. Opening upon your decision, indicate the degree of your agreement or disagreement with each statement by marking a tick (✓) in front of each statement in the columns provided. There is no time limit, however, do not spend too much time pondering over a single item. I expect an honest response from you as it goes a long way in building research knowledge. Thank you.

Most of the students took 15 minutes to complete the test. The responses were collected and scored. The scoring was done as per the scoring scheme developed by the investigator.

Scoring

Scoring was made on the basis of the 5 point rating scale of the Likert type and the scores for intrinsic motivation ranged from 55 to 275. Low scores indicated a low level of intrinsic

motivation and high scores indicated a high level of intrinsic motivation. The ratings are presented as follows for every item.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Pilot Study

A pilot study was conducted with a sample of 30 students selected randomly at the secondary level in different systems of education. The tool was administered to them and since the tool was self-explanatory and simple, the students did not face any difficulty in completing the tool. The tool was subjected to validity check using Bentler-Bonette (1980) Coefficient of Validity. The BBN Normed Fit Index for the constructed tools was found to be 0.94. Cronbach's Alpha method is a more robust test of reliability compared to the simple test-retest method or parallel form reliability. The reliability of the instrument was established using the Cronbach's Alpha method (Cronbach, 1951). and it was found to be 0.84.

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