

Application of SDT to Promote Students Motivation and Engagement in Learning: Non-Asian and Asian Contexts

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Abstract - Self-determination theory was introduced by Ryan and Deci in 1985. It is discussed about three needs; competence, relatedness, and autonomy. It is basically focussed on intrinsic motivation. There are many research studies have been undertaken using SDT all over the world. The main aim of this study is to examine the SDT studies conducted to promote students' motivation and engagement in learning. There are two research objectives formulated in this study; to examine the SDT studies conducted in non-Asian countries and to examine the SDT studies conducted in Asian countries. A semi-systematic review approach was applied to review the literature. This literature review mainly focused on research articles that investigated the SDT studies. Most of the reviewed literature was published in online journals. The selected articles were read, and the findings following the reviewed literature are presented based on the identified research objectives guiding the study. The document analysis was used as the data analysis method in this study. Reviewing both non-Asian and Asian studies, it could be concluded that, Self-determination theory has been used in those both contexts extensively to promote students' motivation and engagement in learning. It is proven the SDT is a validated theory to increase students' intrinsic motivation in different cultural contexts. It is implied that research literature to be further reviewed to examine the application of SDT in different other contexts.

Keywords: Application of SDT, Asian Context, Motivation and Engagement, Non-Asian Context, Self-Determination Theory (SDT)

I. INTRODUCTION

Self determination Theory (SDT) was introduced by Ryan and Deci in 1985. Particularly SDT emphasised about internal motivation. There are three strands (needs) for SDT: competence, relatedness, and autonomy. Competence relates to the ability to utilise one's skills to achieve an outcome, metacognition. Relatedness refers to the development of secure, satisfying connections with others. Autonomy refers to a sense of choice, self-initiating, and self-regulating (Buckler & Castle, 2014). According to Ryan and Deci (1985) if the three strands of SDT are balanced, intrinsic motivation is occurred. Intrinsic motivation is a form of motivation which people engage without of interest, from free choice, with a sense of own control, while not needing any material rewards from the activity. Further, they discuss how extrinsic motivation can lead to intrinsic motivation through four stages of regulation; external, introjected, identified, and integrated.

Kusurkar, Croiset, and Ten Cate (2011) noted that intrinsic motivation can be seen when a person is involved in a task with a real interest. This type of motivation is the expected type of motivation for learning because it is linked with deep learning. Intrinsic motivation is considered as "the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn" (Ryan & Deci, 2000, p. 7). As mentioned before, three basic psychological needs are described in SDT. Further Ryan and Deci (2000) stated that these needs are used in different contexts; for example, healthcare, education, work, sport, religion and psychotherapy.

Chirkov and Ryan (2001) argued that, though these three needs are acceptable in almost all cultural settings, there has been some disagreement regarding the cross-cultural application of relatedness and competence needs, and the autonomy need is extremely arguable. On the whole, competence refers to one's understanding of how to obtain a variety of results and also one's assessment of their ability to obtain a variety of results. Relatedness refers to good relations with others in a community group. Autonomy refers to starting and controlling one's personal actions (Ryan & Deci, 2013).

"SDT is concerned not only with the specific nature of positive developmental tendencies, but it also examines social environments that are antagonistic toward these tendencies" (Ryan & Deci, 2000a, p. 69). Moreover, Niemiec and Ryan (2009) argued that when the teaching-learning process satisfies students' autonomy, competence and relatedness, they are likely to be more intrinsically motivated.

The fulfilment of psychological needs differs because of cultural factors. SDT theorists believe that people across cultures need to satisfy their primary psychological needs (Ryan & Deci, 2000a). Niemiec and Ryan (2009) highlighted two aspects of SDT relevant to teachers. Firstly, SDT gives an integrated conceptualisation of the way that individuals internalise outside demands and, secondly, it is centred on contextual factors related to the enhancement of student motivation, engagement and achievement. Niemiec and Ryan (2009) found that when teachers' instructions and learning activities are supportive of autonomy, it increases

students' intrinsic motivation. By contrast controlling learning environments decrease students' intrinsic motivation. Student choice over activities in which to engage is a primary relationship with their perception about self-determination. Due to extrinsic rewards such as deadlines, and stress the importance of evaluations, students' self-determination is diminished and their intrinsic motivation decreases (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004).

Furthermore, Neimiec and Ryan (2009) found there is a link between the teaching-learning process leading to student satisfaction, which fulfils their basic psychological needs, and intrinsic motivation and autonomous types of extrinsic motivation. According to Ryan and Deci (2000), those three needs (autonomy, competence and relatedness) can facilitate positive community development and individual well-being.

There are many research studies have been undertaken using SDT all over the world. The main aim of this study is to examine the SDT studies conducted to promote students' motivation and engagement in learning. There are two research objectives formulated in this study.

1. To examine the SDT studies conducted in non-Asian countries.
2. To examine the SDT studies conducted in Asian countries.

II. METHODOLOGY

In the social sciences, the literature review method provides opportunity for critical evaluation of the opinions of different scholars on a specific subject which is of interest to the researcher at that moment. According to Snyder (2019) there are different types of review methods: systematic, semi-systematic, and integrative approaches. A semi-systematic review approach could be a good strategy for example maps theoretical approaches or themes as well as identifying knowledge gaps within the literature (Snyder, 2019, p.334). Therefore, in this study semi-systematic approach was applied. This literature review mainly focused on research articles that investigated the SDT studies. Most of the reviewed literature was published in online journals. The selected articles were read, and the findings following the reviewed literature are presented based on the identified research objectives guiding the study. A number of methods can be used to analyse and synthesise findings from a semi-systematic review (Snyder, 2019, p.335). Accordingly, the document analysis was used in this study.

III. RESULTS AND DISCUSSION

A. SDT Studies in Non-Asian Countries

This section discusses SDT studies predominantly carried out in The Netherlands, Germany, Canada, the USA and Australia.

Stroet, Opdenakker, and Minnaert (2013) (in The Netherlands) systematically reviewed the impacts of need supportive teaching for early adolescents' motivation and engagement in learning. They defined need supportive teaching as teachers' arrangement for helping autonomy, structure and participation. Seventy-one empirical studies conducted since 1990 show a significant positive relationship between need supportive teaching and students' motivation and engagement in learning. They further found that, in the majority of the chosen studies, student perspectives were employed to determine need supportive teaching, supporting the SDT proposition that there is a relationship between need supportive teaching and students' motivation and engagement in learning.

Tsai, Kunter, Ludtke, Trautwein, and Ryan (2008) conducted a study to assess German public school seventh grade students' feelings of importance in three school subjects. They found that students were interested in autonomy supportive lessons and, students' interests decreased when controlling lessons were presented. Burton, Lydon, D'Alessandro, and Koestner (2006) found that Canadian students' intrinsic motivation was connected to psychological well-being and self-regulation of educational achievement.

Pintrich and De Groot (1990) conducted a study with 173 seventh grade students from a predominately white, small city school district in south-eastern Michigan, the USA. The students answered a self-report survey developed by the researchers consisting 56 items on student motivation, cognitive strategy use, and management effort. The researchers showed that self-determination had an effect on students' perceptions that the academic tasks they were engaged in were motivating.

Lepper, Corpus, and Iyengar (2005) examined an ethnically diverse sample consisting of 797 mid-western children in grades six through eight in California, The USA. They found that it is not whether a child is intrinsically or extrinsically motivated but the amount of motivation reflected in students' actions which determine academic success. Burton et al. (2006) conducted a study on the differences between the impacts of intrinsic and recognised motivation on well-being and achievement. They employed prospective, experimental and implicit methods to research SDT using 241 school children attending schools in Toronto and regional Ontario, Canada. The study found that it is important to distinguish between intrinsic motivations and identified self-regulatory styles when examining the psychological well-being of students.

Painter (2011) conducted a study of science education on autonomy, competence and intrinsic motivation (an SDT perspective). That research examined the USA eighth-grade science data to examine a structural model that hypothesised how recognised autonomy support, recognised competence in science, intrinsic motivation and science achievement are

associated. The hypothesised model gave a good fit to the data, with support for autonomy having a positive effect on students' recognised capability in science and intrinsic motivation.

In research conducted in rural Midwest in the USA, Van Ryzin, Gravely, and Roseth (2009), examined, through an SDT perspective, autonomy, relatedness and engagement as factors influencing adolescent psychological well-being in school. This study found a direct relationship between peer-related belongingness and positive adjustment not influenced by engagement in school, as well as an association between educational autonomy, teacher-related belongingness and engagement in learning.

Zimmer-Gembeck, Chipuer, Hanisch, Creed, and McGregor (2006) examined whether students' competence was supported by school relationships at school and school fit employing 324 adolescents in south east Queensland, Australia. As expected, school-fit influenced the relationship between teacher-student and engagement to some extent.

B. SDT Studies in Asian Countries

In this section, research conducted in relation to the application of SDT for analysing motivation in the Asian context, in particular, China, Malaysia, India, Indonesia, South Korea, Japan, Vietnam, and Israel, will be discussed.

Zhou, Ma, and Deci (2009) conducted two studies applying SDT to examine the motivation to learn of rural Chinese students. The intent was to investigate whether findings of studies in Western individualist cultures would parallel those with an Eastern collectivist background. The findings clearly showed that teachers' autonomy support was connected to increased autonomous motivation. Moreover, it was found that autonomous motivation clearly connects to proficiency, attraction, and selection. The study showed that learning behaviour and student experiences are similar in both cultures. Thaliah and Hashim (2008) examined the construct of Teacher Autonomy Support Scale (TASS) in English as second language (ESL) classroom in Malaysia and how it impacted students' engagement in the classroom. The sample consisted of 378, 16-year-old students who were chosen from a rural area from 14-day schools. The results showed that teachers' autonomy support was an important predictor of ESL classroom students' cognitive and behavioural engagement.

Sheldon, Abad, and Omoile (2009) examined the generalisability of five propositions resulting from SDT. They employed adolescent students living in two countries, India (n = 926) and Nigeria (n = 363). Autonomy, competence and relatedness needs were predicted to increase positive class assessments and the general well-being of the students. The study found that both types of autonomy support, maternal and paternal, predicted

students' life-satisfaction. The findings show that mature students expect fewer autonomy-supports from parents and teachers. The research also showed that Indian students had better life-satisfaction than students in Nigeria.

Maulana, Helms-Lorenz, Irnidayanti, and Grift (2016), using SDT, hypothesised that teacher autonomy, competence and relatedness support are universally critical encouragers for students' concentration in learning. The authors examined the relationship between the three dimensions of students' perspectives of Indonesian teachers' basic psychological needs support and students supposed autonomous motivation in secondary school (Grades 10–12). The three dimensions of teacher support were examined by employing a social context questionnaire (n = 202), and a survey (n = 4396) of the motivational element was employed to evaluate autonomous motivation. The authors found that teachers' basic psychological needs support is all connected to autonomous motivation in Indonesian students. Overall, the researchers found that the dimensions of teacher support are associated with Indonesian students' autonomous motivation. This research validates the suitability of SDT in the Indonesian context.

Jang, Reeve, Ryan, and Kim (2009) considered the current disagreement of the cross-cultural generalisability of SDT in study employing 10th grade students from a large, middle class, urban secondary school. Their study, from an SDT perspective, investigated whether secondary school students in South Korea were advantaged by autonomy support classroom experiences and psychological need fulfillment. They conducted four studies. In study one, they found that experiences of basic psychological needs supported Korean students' most rewarding learning experiences, and experiences of low autonomy and competence undermined their lowest rewarding learning experiences. In study two, they found that psychological need satisfaction experiences were linked with fruitful and rewarding student results. Study three reproduced and expanded study two's findings by reporting that the hypothesised model described students' positive results even after adjusting for cultural and parental pressures. Study four reproduced the previous cross-sectional results. This study validated the usefulness of SDT in the Asian context.

Hayashi (2005) studied 461 Japanese university students from junior high school all the way through to university (9 years) to examine their motivational changes. He found that, in the majority of students, motivation declined from senior high school to university. He also found that a few students were able to maintain high levels of both intrinsic and extrinsic motivation.

Ngo (2015), using SDT, investigated students' motivation for learning English in higher education in Vietnam. She used two studies employing mixed methods to deal with five main objectives. Study 1 employed quantitative scales (n = 422; 180 English major and 242 non-English major

students) to deal with four research objectives. Study 2 used focus groups (n = 36; 18 English major students and 18 non-English major students) to supplement the findings of Study 1 and to deal with the last research objective. Ngo found that a few of the English major and non-English major students were incapable of appreciating the significance of learning English. More English major students were inherently motivated than non-English major students.

Katz, Kaplan, and Gueta (2009) used SDT to study primary and junior high school students' needs, teachers' help and motivation for completing homework. In particular, they researched teachers' role in supporting students' psychological needs in their motivation for completing homework. The sample consisted of 71 fourth-grade students (27 boys, 44 girls) from two primary schools and 108 eighth-grade students (44 boys, 64 girls) from one junior high school. All the schools were situated in a middle-class population in southern Israel. The researchers found that teacher support moderately contributed to the differences in autonomous motivation for homework.

Chirkov, Ryan, Kim, and Kaplan (2003) conducted a cross-cultural study with 559 people from South Korea, Russia, Turkey, and the USA. They found that, in different cultures, the impact of autonomy is understood in the same way via different practices and autonomy is linked to well-being. Even though some scholars describe direct autonomy as a characteristic of personal behaviours or a matter related to well-being in only Western cultures, the researchers found that it is a fundamental concept for all people.

IV. CONCLUSION

Reviewing all the above studies, it could be concluded that, Self-determination theory has been used in both non-Asian and Asian contexts extensively to promote students' motivation and engagement in learning. In relation to the non-Asian countries, SDT studies predominantly carried out in The Netherlands, Germany, Canada, the USA and Australia were discussed. In the Netherland's study it showed a significant positive relationship between need supportive teaching and students' motivation and engagement in learning. They further found that, in the majority of the chosen studies, student perspectives were employed to determine need supportive teaching, supporting the SDT proposition that there is a relationship between need supportive teaching, and students' motivation and engagement in learning. German research found that students were interested in autonomy supportive lessons and, students' interests decreased when controlling lessons were presented. It was found that Canadian students' intrinsic motivation was connected to psychological well-being and self-regulation of educational achievement. In a USA study the researchers showed that self-determination had an effect on students' perceptions that the academic tasks they were engaged in were motivating. Further, in a USA study researchers found that it is not whether a child is intrinsically or extrinsically motivated but the amount of

motivation reflected in students' actions which determine academic success. Another Canadian study found that it is important to distinguish between intrinsic motivations and identified self-regulatory styles when examining the psychological well-being of students, while a USA study revealed that the hypothesised model gave a good fit to the data, with support for autonomy having a positive effect on students' recognised capability in science and intrinsic motivation. Moreover, another USA study found a direct relationship between peer-related belongingness and positive adjustment not influenced by engagement in school, as well as an association between educational autonomy, teacher-related belongingness and engagement in learning. Further, an Australian study found that school-fit influenced the relationship between teacher-student and engagement to some extent.

Research conducted in relation to the application of SDT for analysing motivation in the Asian context, in particular, China, Malaysia, India, Indonesia, South Korea, Japan, Vietnam, and Israel, were discussed. Accordingly, a China study finding clearly showed that teachers' autonomy support was connected to increased autonomous motivation. Moreover, it was found that autonomous motivation clearly connects to proficiency, attraction, and selection. The study showed that learning behaviour and student experiences are similar in both cultures (Western individualist cultures and Eastern collectivist background). A Malaysian study results showed that teachers' autonomy support was an important predictor of ESL classroom students' cognitive and behavioural engagement. Further an Indian study found that both types of autonomy support, maternal and paternal, predicted students' life-satisfaction. The findings show that mature students expect fewer autonomy-supports from parents and teachers. The research also showed that Indian students had better life-satisfaction than students in Nigeria. The authors found that teachers' basic psychological needs support is all connected to autonomous motivation in Indonesian students. Further, the researchers found that the dimensions of teacher support are associated with Indonesian students' autonomous motivation. This research validates the suitability of SDT in the Indonesian context in four studies. In study one, they found that experiences of basic psychological needs supported Korean students' most rewarding learning experiences, and experiences of low autonomy and competence undermined their lowest rewarding learning experiences. In study two, they found that psychological need satisfaction experiences were linked with fruitful and rewarding student results. Study three reproduced and expanded study two's findings by reporting that the hypothesised model described students' positive results even after adjusting for cultural and parental pressures. Study four reproduced the previous cross-sectional results. This study validated the usefulness of SDT in the Asian context. In a Japan study it was found that, in the majority of students, motivation declined from senior high school to university. It also found that a few students were able to maintain high levels of both intrinsic and extrinsic motivation. A Vietnam study found that a few of

the English major and non-English major students were incapable of appreciating the significance of learning English. More English major students were inherently motivated than non-English major students. Moreover, an Israel study found that teacher support moderately contributed to the differences in autonomous motivation for homework. There was a cross-cultural study conducted with 559 people from South Korea, Russia, Turkey, and the USA. They found that, in different cultures, the impact of autonomy is understood in the same way via different practices and autonomy is linked to well-being. Even though some scholars describe direct autonomy as a characteristic of personal behaviours or a matter related to well-being in only Western cultures, the researchers found that it is a fundamental concept for all people. Significantly, most of the studies above (both non-Asian and Asian) were primarily focused on middle school students. It is proven the SDT is a validated theory to increase students' intrinsic motivation in different cultural contexts. It is implied that research literature to be further reviewed to examine the application of SDT in different contexts.

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