Academic engagement and providing optimal solutions during the outbreak of global epidemics: A qualitative study

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Abstract

Today, one of the most profound issues in the classroom is engaging students with assignments, practices, and written study materials; an issue that, if not successful, has sometimes led to dropout or failure of students in all grades. Looking at the current situation (the spread of the Corona virus all over the world) and taking into account that virtual education has a special value during global epidemics and students generally pursue education at home, achieving students' academic engagement with materials of a lesson in a positive and constructive way seems necessary. Solving personality conflicts, improving the interaction between the person and the environment through research achievements in personality psychology, simultaneously addressing the roles of self-determination and attitude to electronic learning, controlling and applying an optimal level of academic excitement, raising cognitive ability, raising social status - economic, raising academic enthusiasm, raising expectations of success, strengthening the disciplinary atmosphere and optimizing the relationship between teacher and student, frequent presentation of targeted and short assignments are useful ways to achieve the desired level of academic engagement. Teachers, coaches, parents, administrators, counselors and all those who are in some way related to the issue of education should use all their power to engage the student in the desired way with school materials and subjects.

Keywords
academic engagement, providing solutions for academic engagement, academic engagement during epidemics

Introduction

One of the most important challenges of education in the 21st century is how to train students who are prepared to face the changing society and the complexities of the age of information explosion. Extensive scientific and technological advances, along with the rapid obsolescence of previous findings and information, require a type of education in which learners are continuously involved in the learning and problem-solving process and enjoy facing challenges (Karimi et al., 2016).

Academic engagement is a kind of psychological investment and direct effort to learn, understand and master the required knowledge and skills (Siyami et al., 2014). Some believe that students are only involved in academic assignments when the tasks in question require problem-solving and high-level thinking skills such as evaluation, critical and creative thinking. However, it should be kept in mind that in reality, students are not involved in learning, but they are involved in assignments, activities and experiences that lead to learning. Therefore, the main task of the educational system is to encourage students to invest their internal resources (energy, time and attention) (Ghadampour et al., 2017).

Academic engagement refers to a person's active involvement in a task or activity (Reeve et al., 2004). According to Linnenbrink and Pintrich (2003), academic engagement is the quality of effort that learners spend on targeted educational activities in order to directly achieve desired results, while Saklofske et al. (2012) believe that students' involvement in academic tasks means that the task first attracts the student's attention and then, due to attracting the student's attention, he mobilizes his energy to do and finish that assignment and keeps his energy until the end of that assignment, so that it is in accordance with the requirements of that assignment. In fact, the meaning of academic engagement is that the student commits to that task or activity in such a way that he mobilizes all his energy and internal resources to do it (Ramazani & Khamesan, 2017).

In the conducted researches (Afrooz et al., 2009) academic engagement is considered as one of the basic components of doing homework and school activities, and many domestic and foreign researchers measure and implement this variable in the form of a dependent variable, but few

researchers have measured the mentioned variable, influenced by new teaching methods and especially electronic learning methods, which is important from this point of view.

Mohsenpour (2005) showed that cognitive engagement has a direct and positive effect on students' academic progress, and learners who use high-level and meta-cognitive strategies are cognitively better than those who use low-level and cognitive strategies. They are more involved in doing academic assignments.

Abedini (2007) investigated the causal relationships between achievement goals, different dimensions of academic engagement and academic achievement in third grade high school students in two fields of mathematics-physics and humanities. The results of the research showed that in both math-physics and humanities groups, mastery goals have a direct and positive causal effect on deep processing strategies (deep cognitive involvement), task value (emotional involvement) and persistence in the task (behavioral involvement) and these variables have a direct and positive causal effect with academic progress.

Ghorban Jahromi et al. (2014) in a research on the structural model of the relationship between approach-performance goals, academic engagement and academic progress, showed the causal effect of approach-performance goals on the value of the task, persistence in the task, surface and deep processing strategies, and seeking help from peers. It was also observed that the causal effect of deep processing strategies, the value of the task and persistence in the task on academic progress is positive, and the causal effect of surface processing strategies and seeking help from peers is negative on academic progress.

Davodi (2012) in a research titled "Presenting a model for predicting English language academic progress, emphasizing the role of academic self-efficacy, cognitive, motivational and behavioral involvement, showed that the model has a good fit with the data of this research and the direct effect of academic self-efficacy, involvement Emotional, cognitive involvement and behavioral involvement were confirmed on academic achievement. The variable of cognitive involvement has the most direct effect on academic achievement compared to other variables examined in the model. Also, the academic self-efficacy variable has an indirect effect on academic progress through the intermediary variables of emotional engagement, cognitive engagement, and behavioral engagement, in addition to its direct effect. In addition, the results showed that the path coefficients in the model of female students (academic self-efficacy, cognitive, motivational and behavioral engagement with academic progress); It is statistically more significant than the

path coefficients of male students' model, but no significant difference was observed in other path coefficients between the model of male and female English language students.

Gholamali Lavasani and Mehdipour Marlani (2015), in a research titled attachment to the teacher and academic conflict in male and female students, showed that there is a significant difference between the avoidant attachment style to the teacher and the relationship between avoidant attachment to the teacher and academic conflict in two groups. There is, but no significant difference was observed between secure attachment to the teacher and academic involvement. In the group of girls, secure attachment to the teacher was a predictor of high academic engagement, and in the group of boys, secure attachment to the teacher was a predictor of high academic engagement and avoidant attachment to the teacher was a predictor of low academic engagement.

Samavi et al. (2017), in a research titled examining the relationship between academic engagement, self-efficacy and academic motivation with academic progress in high school students of Bandar Abbas city, academic progress can be significantly predicted by the dimensions of academic engagement, academic self-efficacy and academic motivation. Only in the case of the component of agency engagement, no significant relationship was observed with academic achievement. Also, the results showed that there is a positive and significant correlation between self-efficacy and academic progress, between intrinsic motivation and academic progress, between cognitive engagement and academic achievement, between emotional engagement and academic achievement, between behavioral engagement and academic achievement, between agency engagement and academic achievement. In general, the results of the current research confirmed the role of motivational and cognitive variables in predicting and explaining academic performance, which contains useful practical implications in the process of motivating and learning learners.

According to the research conducted in the field of academic engagement and study resources in this field, the present research with a qualitative and analytical perspective first examines the theoretical framework of academic engagement and secondly provides constructive solutions for students' positive engagement with course materials during the outbreak of pandemics.

Material and Methods

The simplest definition of qualitative research is a research whose findings are not obtained through statistical methods or other quantitative tools (Corbin, 1998). This research was applied

in terms of purpose and qualitative method in terms of method. In this research, at first, by studying the written sources related to academic engagement, the theoretical framework of this field was presented, and then by extracting from the research sources, especially in the suggestions section, it was categorized and finally, constructive solutions for positive engagement in students have dealt with course materials during the outbreak of global epidemics were presented.

Results

1. Definitions of academic engagement

In today's era, the concept of academic engagement has been used by various researchers. This concept refers to the quality of effort that students spend on their targeted educational activities to directly contribute to achieving desired results (Rastgar et al., 2008). Academic engagement, which plays an important role in predicting students' academic progress, is defined as the amount of energy spent by the student to perform academic activities, as well as the effectiveness and efficiency obtained (Saklofske et al., 2012).

Examining this component seems necessary in the topics related to education. Academic engagement refers to a durable state within the individual that leads to involvement in school activities and its improvement. Saber and Sharifi (2013) have defined it as a kind of psychological investment and direct effort to learn, understand and master the required knowledge and skills, considering the existence of different definitions of academic engagement. This definition seems novel and interesting considering its psychological perspective and moving away from the operational environment.

According to some scholars in this field, students are only involved in academic assignments when the tasks in question require problem-solving skills and high-level thinking such as evaluation, critical and creative thinking. They do not learn, but are involved in assignments, activities and experiences that lead to learning. Therefore, the main task of the educational system is to encourage students to invest their internal resources (energy, time and attention).

2. Factors affecting academic engagement

Relationships with teachers and parents separately can play a role in students' conflicts. Relationships with parents and teachers play a significant role in all kinds of engagement in classes, and students who feel praised by their teachers and parents report engagement in class activities as interesting and fun, but children who feel insignificant or rejected by teachers and

parents, they are reporting the engagement in class activities as tiring with resentment and anger. Children whose relationships with teachers are accompanied by disengagement are less involved in classroom activities and fall behind academically (Furrer & Skinner, 2003).

It is noted that the social aspects of the classes show the frequency of students' engagement in learning. In this regard, Meyer and Turner (2006) emphasize that engaging students in learning requires emotional experiences. The quality of teacher-student relationships has a significant relationship with the teacher's rating of classroom engagement. In a research, Paulsen, Bro and Some researchers have emphasized the indicators of behavioral engagement such as effort and persistence and investigated the role that parents and teachers can play in it. Furrer and Skinner (2003) state that the feeling of special importance in interaction with important people (such as parents and teachers) leads to energetic behavior such as continuous effort and participation. The perception of access to reliable people allows students to show more self-reliance, strength, and tenacity in the face of obstacles.

Robbins et al. (2004) in their meta-analysis on the role of psycho-social processes in academic performance and academic persistence of students concluded that social bonding mechanisms can predict students' persistence even after controlling for academic readiness. Parents who participate in children's school activities (pay attention to schoolwork and participate in children's extracurricular activities) have children who increase their efforts to complete homework and assignment.

Stahmer et al. (2003) stressing that the social environment of the family affects children's efforts, attitudes and self-concept. Parents who are aware, attentive, encouraging encourage their children to perform better in academic assignments. Mothers who provide guidance during their interactions with their children and encourage the initiation of activities at an early age (i.e. those who support independence) have more persistence in solving homework at one year of age (Grolnick et al., 1984) and show more persistence and competence at the age of 20 months (Frodi et al., 1985). Students who benefit from parental involvement have a positive attitude towards school, have better homework habits and complete most of their homework on the weekend. Parents who support independence encourage their children to work hard. Warm and positive parents are more likely to develop active regulation efforts in their children ((Eisenberg et al., 2005).

3. Dimensions of academic engagement

Despite agreement on the multidimensional nature of academic engagement, there is disagreement about the number of dimensions. In different studies, its dimensions vary from two to four dimensions. In Finn's model, academic engagement consists of two dimensions: behavioral (participation in the classroom and school) and emotional (feeling of belonging to school and valuing learning). In subsequent researches, the cognitive dimension was also added to the previous dimensions (Christenson et al., 2012).

Linnenbrink and Pintrich (2003) also proposed three dimensions for academic engagement; The first dimension is behavioral engagement, which is the visible behaviors of students in dealing with homework, which includes the components of homework effort, persistence in homework, and asking for help from others. The second dimension is cognitive engagement which consists of the types of processing processes used by learners for learning (including the components of using cognitive and metacognitive strategies) and finally the motivational (emotional) dimension which consists of having positive feelings during learning and preventing the creation of negative emotions such as anxiety. The latter dimension includes the components of feeling, value and emotion.

According to the dimensions mentioned by Linnenbrink and Pintrich (2003) and Appleton et al. (2006), several indicators have been proposed for each of these dimensions. According to them, behavioral engagement includes variables such as doing homework on time; completing education, graduating, attending and volunteering in the classroom, and participating in extracurricular classes, but cognitive and emotional conflict include indicators that are more internal and less visible. For example, the use of self-regulation strategies, communication between current efforts and future desires, goal setting and autonomy are indicators of cognitive engagement, and identity and belonging to school, peers and teachers are indicators of emotional engagement.

The opinion of Wang and Eccles (2013) is somewhat different, they believe that behavioral engagement refers to the actions and activities that learners have directly towards school and learning, including positive behavior and the absence of behavior that disrupts educational and academic duties.

Ramazani and Khamesan (2017) are of the opinion that in a real classroom, all three dimensions of academic engagement are related because if students are cognitively and emotionally involved, they are likely to be behaviorally involved as well. However, it is possible that students

are involved in terms of behavior but not cognitively. For example, when students are thinking about something other than the lesson (cognitive disengagement) but their eyes are on the teacher (behavioral engagement). Sometimes students are actively engaged cognitively and behaviorally, but not emotionally involved. For example, students in higher education levels may try hard to learn some subjects and use metacognitive strategies but do not consider it a useful or interesting subject (lack of emotional involvement).

The student is involved behaviorally, cognitively and emotionally in the activity provided by the teacher (such as writing an essay or solving a math problem). This student puts effort into the task, shows interest, and uses higher order thinking strategies to achieve important outcomes such as success. The above description is an accurate but incomplete picture of an engaged student because an engaged student does more than that. In addition to the above, the engaged student actively participates in the educational process, to a greater or lesser extent, not only to learn, but to create learning environments that motivate him more. This concept of factor engagement is the fourth dimension of academic engagement that first proposed by Reeve and Tseng (2011).

Active engagement is the constructive participation of the student in the educational process, which he receives (Reeve & Tseng, 2011). In the above definition, the student actively tries to personalize the education flow and improve its conditions. For example, during the course of education, he may ask a question, raise his priorities and needs, request resources or learning opportunities, and discuss what he likes or dislikes (Ramazani & Khamesan, 2017).

Now the question arises, why factor engagement should be added as the fourth dimension of academic engagement? As described, the teacher presents a series of activities to the students and the students respond to these activities, but this is a linear model (the teacher presents an activity and the students engage in the activity to varying degrees) in proportion to the students engaging in the activity, they take and learn. While students do not passively react to learning activities, they actively improve and enrich their conditions. For example, they change their situations to more interesting, personal, and challenging situations, and even create new situations or demand situations that are not just passive responses. In a better explanation of this issue, it can be said, sometimes students try to go a step beyond receiving education and provide inputs to better guide the education flow they receive to personalize and improve it. Therefore, a more accurate and deeper picture of when the teacher provides a learning activity is that the

students do not passively show different levels of behavioral, cognitive and emotional involvement, but actively try to improve their learning activities (Ramazani & Khamesan, 2017).

4. Academic engagement studies

In order to lay the groundwork for providing constructive solutions in the field of academic engagement during the outbreak of global epidemics, the researcher in this section has described a part of his studies in the research of the mentioned field inside and outside the country.

Yousefi and Bordbar (2016), in a research entitled the mediating role of self-system processes and academic emotions in the relationship between self-supportive environment and academic engagement, showed that self-supportive environment has a direct effect on self-system processes and academic engagement and an indirect effect, through the processes of the system and academic emotions have an impact on academic engagement. This variable, due to the processes of its system, had an indirect effect on academic emotions. The processes of the system itself had a direct effect on academic emotions and academic engagement, as well as an indirect effect on engagement through academic emotions. Academic emotions also had a positive and significant effect on academic engagement. Based on this, the processes of the self-system and academic emotions play a mediating role between the supportive environment of self-following and academic engagement.

Modaressi et al. (1970), in a research entitled "The role of self-determination on the academic performance of Tehran secondary school students: the mediating role of academic engagement and attitude towards e-learning", the variables of self-determination, academic engagement and attitude towards e-learning can have an effect have a positive and meaningful effect on academic performance and use them to strengthen the academic performance of students.

Vakili et al. (2018), in a research entitled the mediating role of academic engagement in the relationship between academic excitement and progress, showed that academic engagement plays a mediating role between academic excitement and progress, changes in academic excitement and academic engagement able to explain 37% variance of progress. Inactivating negative emotions such as boredom are harmful to motivation and lead to superficial information processing and lack of academic engagement of students. Therefore, according to the important role and position of positive currents, it seems that the educational environment should seek to cultivate positive emotions in its students.

Amiri et al. (2019), in a research titled structural model of predicting academic engagement based on cognitive ability and socio-economic status with the mediation of academic enthusiasm in students, showed that the effects of cognitive ability, socio-economic status, and academic enthusiasm was significant on academic engagement as well as cognitive ability and socio-economic status on academic enthusiasm. Also, cognitive ability and socio-economic status had significant indirect effects on academic engagement through academic enthusiasm. Also, the designed model had a good fit with the sample data of this research. Therefore, the mentioned structural model can predict the level of academic engagement of students according to the variables of cognitive ability and socio-economic status and academic enthusiasm.

In a study titled Psychometric Characteristics of Academic Engagement Questionnaire in High School Students, Talepasand et al. (2019) showed that the first-order six-factor model has a better fit than competing models. Three components of teacher-student relationships, peer support for learning and family support for learning (psychological engagement) and three components of future goals and aspirations, control over school assignments and external motivation (cognitive engagement) clearly show a six-factor structure of academic engagement. The criterion validity of the scale showed that self-efficacy and conscientiousness have a positive and significant correlation with the academic engagement subscales. Only the correlation of conscientiousness with extrinsic motivation was not significant. Therefore, the desired scale is valid in the research community and has the ability to explain the psychological and cognitive characteristics of academic engagement.

Wilms (2003) showed in his research that usually in schools where students have a high level of school engagement there are high expectations of success, a strong disciplinary atmosphere and good relationships between teachers and students.

Klusmann et al. (2008) investigated the relationship between homework completion and academic progress in mathematics in a research that controlled for intelligence, social and economic status, motivation and type of school. They showed that the frequency of homework has a positive relationship with getting higher grades in mathematics and the long time spent doing homework has a negative relationship with academic progress. It should be said that the amount of homework is one of the examples of cognitive engagement.

Pekrun and Linnenbrink-Garcia (2012) investigated the relationship between academic emotions and students' academic engagement in a research. The results of this research showed that there is a significant relationship between academic excitement and academic engagement.

5. Providing optimal solutions during the outbreak of global epidemics

A. Resolving personality conflicts and modifying person-environment interactions through interventions based on personality psychology.

B. Simultaneously addressing the roles of self-determination and attitude towards e-learning.

C. Controlling and applying an optimal level of academic excitement to increase the optimal level of academic engagement

D. Enhancing cognitive ability, socio-economic status, and academic enthusiasm in order to achieve an optimal level of academic engagement

E. Strengthening the sub-components of academic engagement including: teacher-student relationships, peer support for learning, family support for learning, future aspirations, control over school assignments and external motivation.

F. Raising the expectations of success, strengthening the disciplinary climate and optimizing the relationship between teacher and student

G. Increasing the number of targeted assignments towards which the student has a positive attitude and reducing the time of completing assignments to the desired level and below the student's tolerance threshold. (For the two ways mentioned in this section, it is as follows; frequent presentation of targeted and short assignments)

H. Recounting the negative consequences of dropping out of school in counseling and academic guidance classes

Discussion

Teachers, coaches, parents, administrators, counselors and all those who are in some way related to the issue of education should use all their power to engage the student in the desired way with school materials and subjects. A student who has low academic engagement cannot achieve good academic progress, and his fate will lead to academic failure and eventually dropping out. The negative consequences of the student not engaging with the course materials are so strong and irreparable that it is very necessary to find useful and productive solutions in this field, and researchers should do their best to achieve the aforementioned solutions, especially during infectious diseases. Considering the time of conducting this research, when the corona disease

has spread all over the world and virtual education has replaced face-to-face education, the role of academic engagement is more noticeable than before.

References

Amiri, L., Ebrahimi Moghadam, H., & Babakhani, N. (2019). Structural model of predicting academic engagement based on cognitive ability and socioeconomic status by mediating academic enthusiasm in students [Research]. *The Journal Of Psychological Science*, *18*(74), 215-222. http://psychologicalscience.ir/article-1-92-fa.html

Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology*, *44*(5), 427-445.

Christenson, S., Reschly, A. L., & Wylie, C. (2012). *Handbook of research on student engagement* (Vol. 840). Springer.

Eisenberg, N., Zhou, Q., Spinrad, T. L., Valiente, C., Fabes, R. A., & Liew, J. (2005). Relations among positive parenting, children's effortful control, and externalizing problems: A three-wave longitudinal study. *Child development*, *76*(5), 1055-1071.

Frodi, A., Bridges, L., & Grolnick, W. (1985). Correlates of mastery-related behavior: A short-term longitudinal study of infants in their second year. *Child development*, 1291-1298.

Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, *95*(1), 148.

Grolnick, W., Frodi, A., & Bridges, L. (1984). Maternal control style and the mastery motivation of one-year-olds. *Infant Mental Health Journal*, *5*(2), 72-82.

Klusmann, U., Kunter, M., Trautwein, U., Lüdtke, O., & Baumert, J. (2008). Engagement and emotional exhaustion in teachers: Does the school context make a difference? *Applied psychology*, *57*, 127-151.

Linnenbrink, E. A., & Pintrich, P. R. (2003). The role of self-efficacy beliefs instudent engagement and learning intheclassroom. *Reading &Writing Quarterly*, *19*(2), 119-137.

Meyer, D. K., & Turner, J. C. (2006). Re-conceptualizing emotion and motivation to learn in classroom contexts. *Educational Psychology Review*, *18*(4), 377-390.

Modaressi, M., Farzad, V., & Kooshki, S. (1970). The Role of Self-determination on Academic Performance in Adolescent students with Mediating Academic Engagement and Attitude toward E-learning. *Research in School and Virtual Learning*, *5*(3), 85-100. https://etl.journals.pnu.ac.ir/article_4501_7c3999c20a4197d91ca3a57e326518b0.pdf

Pekrun, R., & Linnenbrink-Garcia, L. (2012). Academic emotions and student engagement. In *Handbook of research on student engagement* (pp. 259-282). Springer.

Ramazani, M., & Khamesan, A. (2017). Psychometric characteristics of Reeve's academic engagement questionnaire 2013: with the introduction of the Agentic Engagement. *Quarterly of Educational Measurement*, *8*(29), 185-204. https://doi.org/10.22054/jem.2018.22660.1555

Rastgar, A., Hejazi, E., Lavasani, M., & Gurban Jahrami, R. (2008). Intelligence beliefs and academic achievement: The role of achievement goals and academic engagement. *Psychological research*, *12*(1), 25-11.

Reeve, J., & Tseng, C.-M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary educational psychology*, *36*(4), 257-267.

Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological bulletin*, *130*(2), 261.

Saber, S., & Sharifi, H. P. (2013). Predicting dimensions of Academic Engagement by Identity Styles in First Grade girl students of Tehran State High Schools. *Research in Curriculum Planning*, *10*(38), 72-85. https://jsr-e.isfahan.iau.ir/article_534293_b3a8f0b36593fd28e6464c4984057cdb.pdf

Saklofske, D. H., Austin, E. J., Mastoras, S. M., Beaton, L., & Osborne, S. E. (2012). Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. *Learning and Individual Differences*, *22*(2), 251-257.

Stahmer, A. C., Ingersoll, B., & Carter, C. (2003). Behavioral approaches to promoting play. *Autism*, *7*(4), 401-413.

Talepasand, S., Mohanna, S., & Rostami, S. (2019). Psychometric Properties of Student Engagement Instrument in High School Students. *Educational Measurement and Evaluation Studies*, *9*(26), 7-28. https://doi.org/10.22034/emes.2019.36113

Vakili, S., Naghsh, Z., & Ramezani khomsi, Z. (2018). The mediating role of academic engagement in the relationship between academic excitement and achievement. *Journal of Research in Educational Science*, *12*(Special Issue), 615-627. http://www.jiera.ir/article_65017_be0dfa5f09be37a855754bbde0252b35.pdf

Wang, M.-T., & Eccles, J. S. (2013). School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. *Learning and instruction*, *28*, 12-23.

Wilms, W. W. (2003). Altering the structure and culture of American public schools. *Phi Delta Kappan*, *84*(8), 606-615.

Yousefi, F., & Bordbar, M. (2016). The Mediation Roles of Self-System Processes and Academic Emotions in Relationship between Autonomy Supportive Environment and Academic Engagement. *13*(49), 13-28. https://jip.stb.iau.ir/article_526835_cb6958a92053e99d7f4b32d683c7c783.pdf