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ORIGINAL ARTICLE

Representation of Independent Thinking Indicators in the Curriculum of High School Students

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Abstract

Aim: This study aimed to conceptualize independent thinking in the curriculum of high school students and represent its indicators. Hence, we conducted a systematic review of literature in different scientific databases in the last 20 years using the documentary method. As a result, 30 documents were identified. Data analysis based on a thematic analysis strategy led to the emergence of 175 open codes, which were reduced to 146 meaningful codes by removing duplicate codes, classified into eight main themes and 30 subthemes, and finally validated. The identified categories include “feeling free and the right to choose, mutual and collaborative learning, mastery of cognitive skills, mastery of metacognitive skills, familiarity with problem-solving skills, family education, independent activity, and conscious obedience”.

Keywords: *Independent Thinking, Curriculum, High school Students, Indicators of Independent Thinking*

Introduction

One of the important approaches in modern educational systems is the approach to cultivating independent thinking in children and adolescents. Although it is currently receiving a special emphasis, cultivating independent thinking has always been of interest in the history and tradition of thought (Barkhordari and Banki, 2012).

A variety of opinions, including those of Thomas Hobbes, John Stuart Mill, and John Locke, suggest that children be raised by their parents. All three philosophers consider the child as someone who should be educated in accordance with the preconceptions of adults (Voloi et al., 2017). Traditional views towards children have created a vulnerable and naive image of them, and little by little, such views have turned into dominant ideologies suggesting that children are so weak and vulnerable that they should be protected and taken care of. In this regard, schools contributed to this preconception about childhood in many ways. They aggravated the vulnerable and dependent nature of children with orderly and regular operations (Warnick, 2012).

In the present era, many families are affected by behavioral disorders of their children, who suddenly, for example, turn to addiction at university or during military service (Qabadzadeh et al., 2016), or their marriage end in divorce and separation due to the interference of other people (Qassimi and Sarukhani, 2013). These occur due to following the wrong educational patterns. Children imitate their parents and elders, and this makes the elders and parents happy, but as soon as they reach youth, parents can no more control them, and usually, peers and friends have more influence on them. Such issues make a person mentally and intellectually dependent on others in all stages and situations of life and cause irreparable damage to themselves, their family,

society, etc. It appears that, by following the traditional approach of caring for children, schools have aggravated such issues in the Iranian society. Ciechanowska (2011) suggests that since learners do not succeed in controlling their education process, they will not be able to control their life either. Zuurmond et al (2023) state in a research that in order for students to be independent in the future, it is necessary that socialization and education of social values be accompanied by critical thinking.

Therefore, conceptualizing independent thinking for high school students and designing a framework for developing its curriculum can prevent some of the psychological, social, cultural, and economic problems, including intellectual colonialism, which is considered modern colonialism in today's world. Independent thinking can help flourish individual's minds and thoughts and consequently increase social vitality.

Given that few studies have been conducted in this field and there is no consensus or comprehensive definition, we tried to conceptualize this sensitive and substantial construct while identifying the indicators of independent thinking in the high school curriculum. The following questions were thus raised:

- What are the main themes (indicators) of independent thinking in the high school curriculum?
- What are the subthemes of independent thinking?

Methodology

In this research, the indicators of independent thinking were investigated using the systematic review method. To this end, keywords such as "independent thinking, self-determination, intellectual independence, and independent learning" were searched in Science Direct, Google Scholar, Springer, IEEE, and ACM scientific databases for the last 20 years (1999-2019) which led to the identification of 30 documents including books, articles, theses, and scientific websites. Thematic analysis was used to analyze the data and identify the indicators of independent thinking. Then survey method was used to assess the appropriateness of the identified themes and codes and to validate the framework formed for the construct of independent thinking.

For this purpose, first, a systematic review of the literature was conducted to identify the indicators of independent thinking. The documents and literature of Iranian and foreign research were analyzed using the thematic analysis technique of Braun and Clarke (2006).

Results

First, due to the novelty of the subject, the literature was searched from 1980 to 2019 to identify the dimensions and indicators of independent thinking, and then the findings were analyzed by thematic analysis. The main unit of coding in this research was the concept. During the detailed analysis of the data, the researcher labeled the codes to create the concepts directly from the research literature (*in vivo*) or based on their similarities, and thus determined independent thinking indicators. In order for the obtained indicators to be consistent with the theoretical foundations, the theoretical foundations and the research background underwent systematic content analysis again. Thus, using thematic analysis, 175 codes were identified through open coding in the first stage, which were reduced to 146 axial codes by removing similar codes. These were classified into eight themes and 30 subthemes (Figure 1) and finally validated via CVR.

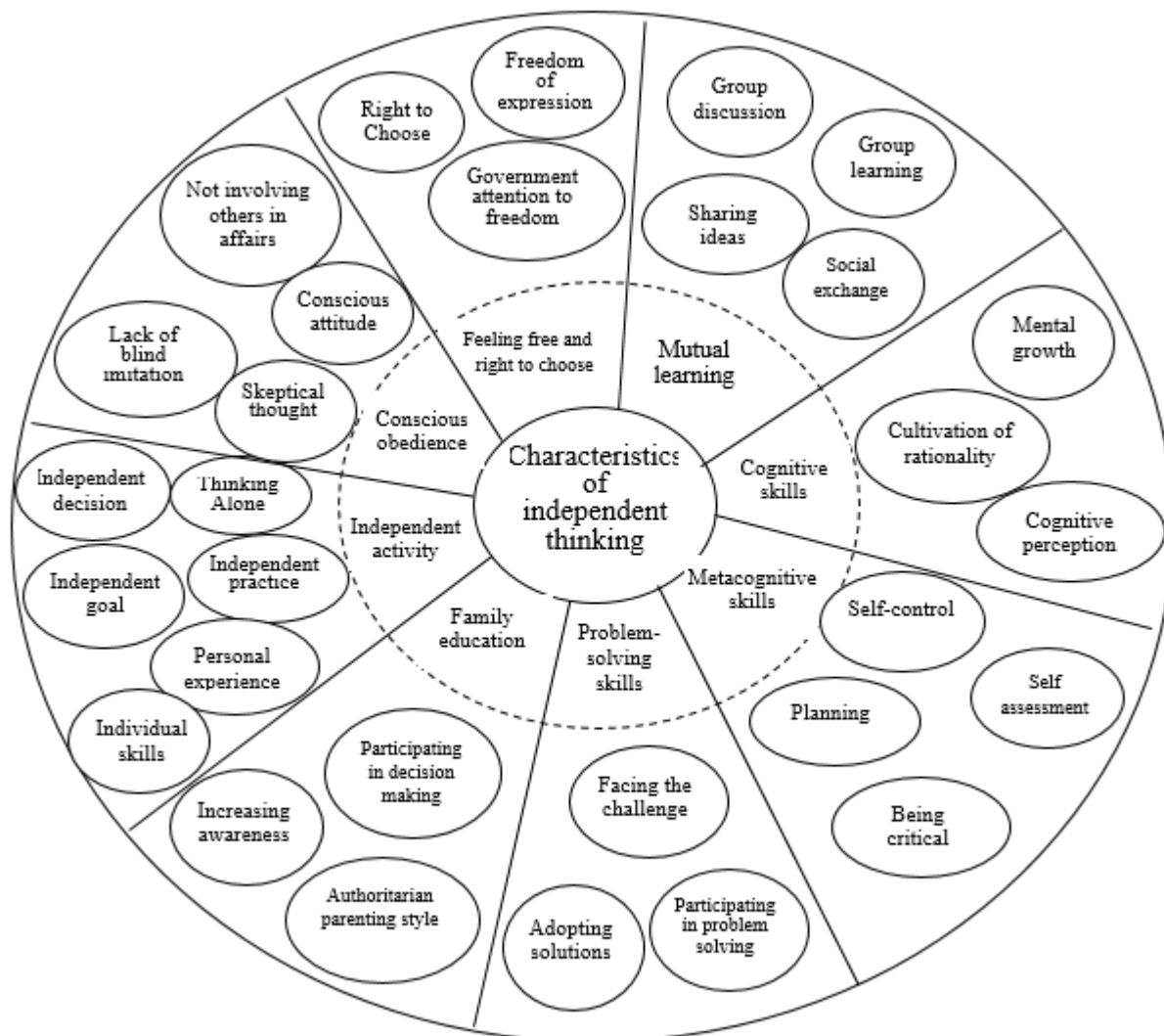


Figure 1. Dimensions and independent thinking indicators

The main themes include “feeling free and the right to choose, mutual and collaborative learning, mastery of cognitive skills, mastery of metacognitive skills, familiarity with problem solving skills, family education, independent activity, and conscious obedience”.

Discussion and conclusion

Addressing independent thinking in high school, teaching the tendency towards independent thinking, facilitating learning activities according to independent thinking, and evaluating students to achieve the set goals can solve many problems in this field in the long term. Based on the obtained results if the identified indicators are used in the educational processes, children can be expected to become independent people with individual capabilities and resistant to social disorders and harms in their adulthood.

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