

研究ノート

Analyzing the Trends in Previous Overseas Research Focused on Career Self-Efficacy:

Focusing on Research Adapting the Concept of Self-Efficacy to Career Development

YAMAZAKI Yasutoshi

Teacher Education Center, Matsumoto University (former)

キャリア自己効力感に関する海外先行研究の動向に関する考察
—キャリア発達への自己効力感概念の適用に関する研究に焦点を当てて—

山崎 保寿

元 松本大学教職センター

Abstract

In order to support students' formation and achievement to their future careers and vocational goals, the enhancement of career education has become more important than ever, and research on career education is being conducted. The purpose of this study is to obtain suggestions for future career education research by examining research trends in career education overseas. In particular, this study aims to deepen the consideration of the abilities cultivated through career education by reviewing research trends on career self-efficacy. This study focuses on career education in high schools and career self-efficacy surveyed high school students. The previous research reviewed in this study has provided suggestions for future research on career education and career self-efficacy.

Keywords

career development, career education, career self-efficacy, career choice, high school

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I . Introduction

1. Background

Modern society is becoming increasingly globalized and internationalized, and we are now in the days of advanced IT technology, referred to as Society 5.0. Against the background of social changes such as advancement in industrial structure and increased employment mobility, society is becoming more complex and diverse than ever before.

These social changes not only affect the situation of society in which students will work in the future, but they will also have a major impact on educational activities in schools. In light of this social background, it is important to cultivate appropriate views on careers and work in students and foster thoughts about future careers and occupations. The importance of career education^{Note1}, which encourages students to develop their careers and develop the ability to choose their career path, is increasing. Career education is the development of knowledge, skills, and attitudes through a planned program of learning experiences in education and training to assist informed work and study decision-making (Keele S.M., Swann R., Davie-Smythe A. (2020)¹⁾). In particular, high school years is a meaningful time when students choose and decide on their career paths, and it is important to provide educational guidance that encourages career development and helps students build their career paths.

Career education is becoming increasingly important in nowadays' highly advanced and complex society. Career education supports students' career development, helps them acquire desirable views on occupations and work, and cultivates the ability and attitude to independently choose their career paths. An established method for measuring the effectiveness of career education is the use of a scale for career self-efficacy, which applies the concept of self-efficacy to career development.

2. Purpose

Self-efficacy refers to the motivation of human behavior, and scales for evaluating self-efficacy have been developed and established. The idea of self-efficacy and evaluating method of self-efficacy have been applied to career development. The main focus of this paper is the research on career self-efficacy in high school. The purpose of this study is to review and examine previous overseas research on career self-efficacy and clarify its trends.

And another purpose of this study is to provide a fundamental view for future career education research. Furthermore, it is intended to provide researchers with insight and suggestions for career education that they can perform interventions and put that into practice.

The papers reviewed in this study are based on research of students' consciousness focused on the career self-efficacy scale. Although the subjects of the papers examined in this study include students of different ethnicities or countries, papers were selected as contents that accurately used the career self-efficacy scale.

3. Method

To collect the papers to be reviewed in this study, databases that provide access to articles related to education and psychology were used. The databases were APA PsycInfo, ERIC, PubMed, TRC, and Web of Science^{Note2}. The searches included at least the keywords 'career self-efficacy' and 'high school,' combined with a few other related words when necessary. The search results were further narrowed down to the papers that appropriately used measures of career self-efficacy. Additionally, occupational situations and the process of career decision-making may differ from country to country. In order to narrow down the papers, the author focused on the papers which career education experiences or expert intervention were considered to be significant.

Table 1. Characteristics of the research

No	Researchers	Year	Respondent	
			Amount	Affiliation
1	Gaylor L., Nicol J.J.	2016	14	High school
2	Falco L.D., Summers J.J.	2019	88	High school (girls)
3	Gashi L.J., Bërxulli D., Konjufca J., Cakolli L.	2023	47	High school
4	Creed P.A., Patton W., Prideaux L.A.	2007	166	High school
5	Nota L., Ferrari L., Solberg V.S.H., Soresi S.	2007	253	Youth (mostly high school students)
6	Turda E.S.	2024	300	Teenagers
7	Pedditz M.L., Nonnis M., Fadda R.	2023	2,104	Middle school (ages 11-14)
8	Presti A.L., Pace F., Mondo M., Nota L., Casarubia P., Ferrari L., Betz N.E.	2013	3,390	High school
9	Abdullah S.M.	2023	164 ~ 395 Totally 3,255	High school, University, etc

And, the author prioritized papers that appropriately examined measures of career self-efficacy. In narrowing down the number of papers, the author searched for articles from 2007 onward based on the two keywords ‘career self-efficacy’ and ‘high school,’ adding the words ‘career development,’ ‘career choice,’ and ‘career education’ as appropriate. As a result, more than 80 papers were found, but abstract-only papers, papers whose question items were not based on previous research on career self-efficacy were excluded. A total of 26 articles were reviewed, including those available through downloads from the paper search site mentioned above and those available through university libraries. Finally, it narrowed the list to three articles as studies that involved career education practices or professional interventions and six studies as survey research. Based on the results of such searches and refinements, 9 papers were ultimately selected to be examined. Table 1 is the characteristics of the research.

II. Career development and self-efficacy

This section briefly reviews the concept of self-efficacy proposed by Bandura, describes how the concept of self-efficacy has been applied to career development, and considers the subsequent trends regarding the relationship between career development and self-efficacy.

The concept of self-efficacy was proposed and formulated by Bandura (1986, 1997)²⁾. Bandura (1986) defined self-efficacy as a term that originates from social cognitive theory, and self-efficacy affects the belief that one can perform a given task. He says self-efficacy beliefs are based on one’s assessment of one’s ability to plan and perform the actions necessary to achieve specific goals or desired outcomes. Bandura (1997) suggested that self-efficacy affects the direction of how people are motivated and act. He confirmed that self-efficacy can influence individual’s style of thinking, motivation to perform tasks, and level of achievement in areas of real life. Self-efficacy beliefs play an important role in one’s thoughts and actions.

Applications of self-efficacy theory to career development were studied by Hackett and Betz (1981)³⁾. They used self-efficacy theory in the context of career development, focusing on women's career development, and understanding career choice behavior with relation to self-efficacy was explored by Betz and Hackett (1986)⁴⁾, Betz, Klein and Taylor (1996)⁵⁾. Betz and Hackett clarified career self-efficacy encompasses career-related behaviors, occupational choices, and the ability to perform in implementing those choices. Betz, Klein and Taylor developed an evaluation scale of career decision-making self-efficacy, so-called a short form of the widely used Career Decision-Making Self-Efficacy Scale (CDMSE: Taylor and Betz, 1983)⁶⁾.

Since then, as Multon (2000)⁷⁾ pointed out, the perspective on the relationship between career development and self-efficacy has become increasingly important. Multon explained the situation of modern society concerning career development as follows: the world of work has been changing rapidly in the last few decades due to new technology, changes in the organization of work, shifting requirements for worker knowledge and skill, and a global labor surplus. And he pointed out current trends for the area of career development, which include the following: substantial change will continue to occur in the occupational, economic, industrial, and social environments and structures and these changes will influence individual career development. There is a greater awareness of the need to attend to career development issues across the life span.

III. Effects of student experiences or expert interventions

1. Effects of student experiences

Career education is often practiced with student experiences. This research was conducted to examine the effectiveness of well-designed experiential career education.

Gaylor and Nicol (2016)⁸⁾ examined students' perceived self-efficacy and motivation in the context of experiential high school career education. They implemented through an exploratory mixed methods case study of 14 students in an elective experiential career education class offered in a Canadian public high school. In Canada, career planning has become a focal point of high school programming. They focused experiential career education called Career and Work Exploration 30 (CWE30) which is one of a three-course series. CWE30 includes theory-based and experiential learning component in a career development continuum of awareness, exploration, and experience in the high school.

The fundamentals of their research were constructed by statistical analysis and individual interviews. Statistical data were generated by having two measures of the same questionnaires at the start and end of the semester: the career decision-making self-efficacy scale short form (CDMSE-SF). They found there was a significant difference between the first and second CDMSE-SF scores. The results meant a significant positive shift in career decision-making self-efficacy and CWE30 curriculum clearly provides an effective framework to support students' career explorations. Gaylor and Nicol clarified that students clearly appreciated the integration of experiential and academic components within CWE30.

Thus, well-designed experiential career education is effective when it concerns the career decision-making self-efficacy.

2. Effects of expert interventions

Career education can be made more effective by including expert intervention. This research was implicated to verify the effectiveness of the intervention to career education with the STEM curriculum.

In the United States, the science and engineering industries are rapidly expanding and advancing, creating a need to develop a large number of high-quality STEM-related human resources. Falco and

Summers (2019)⁹⁾ studied the intervention method to improve career decision self-efficacy and STEM self-efficacy of 88 high school female students. Falco and Summers evaluated the effectiveness of the nine sessions intervention program implemented across the STEM curriculum course. For example, the last steps of the practical intervention program, the eighth and ninth session, were set up as follows, with the facilitator working for the students in the following way:

Session 8: Verbal persuasions were integrated into the group process by the facilitator who modeled by sharing a positive affirmation about the career decision process with each group member. Group members were invited to share affirmations with each other.

Session 9: The last session was focused on goal setting, and group members were prompted to think about what they would like to have happen after the end of the group, to share personal goals and strategies for meeting their short- and long-term goals.

Researchers found out the intervention had effects on girls' career decision-making self-efficacy. The results of this research indicated the intervention had a positive impact on participants' career decision self-efficacy and STEM self-efficacy.

Thus, it was confirmed that participating in the exercise had a positive impact on the students' career self-efficacy.

3. Effects of career guidance workshops

It is also important to incorporate career guidance into career education. This research verified the effectiveness of career guidance workshops introduced in the career education curriculum.

Gashi, Bërxulli, Konjufca, and Cakolli (2023)¹⁰⁾ studied the effectiveness of the structured career guidance support program in high school. This program, based on a five-step model, included self-awareness, career exploration, school and career paths, real encounters, and decision-making. The

career exploration step has a career guidance workshop that combined lectures, discussions, individual activities, and pair and group work.

For an example of the steps, the third step, which is the school and career path, was set up in the following way, with the experts supporting the students:

Students were instructed to choose the most appropriate educational path based on their immediate surroundings and resources, after developing self-awareness and learning about career choices. Students were urged to consider various choices, including investigating careers and educational courses accessible in nearby institutions. Career experts guided them through career counselling and assisted them in the planning process.

The aim of this step is to assist students in choosing the most effective educational path to achieve their career aspirations.

Researchers implemented intervention study and evaluated the effectiveness of the career guidance workshop intervention by examining changes in career self-efficacy, outcome expectations, and career goals with 47 high school students. Data were collected through career self-efficacy (using career self-efficacy scale with 25 items), outcome expectation, and career goal questionnaires and analyzed using a pre- and post-test.

Thus, it was confirmed that introducing career guidance workshops into career education is effective concerning career self-efficacy.

IV. Questionnaire survey on career self-efficacy

1. Important roles of career self-efficacy

It is important to research the role of career self-efficacy during the high school years, as this is a significant time for students to plan and explore their future career paths.

Creed, Patton, and Prideaux (2007)¹¹⁾ researched the change over time in career planning and career

exploration for 166 high school students on the viewpoint of career self-efficacy. They used the 25 items short version of the Career Decision-Making Self-Efficacy Scale. According to analyzed data, students with higher levels of career decision-making confidence had more ability and reported higher career planning/exploration. The results indicated important roles of self-efficacy in current and future career planning/exploration for high school students.

2. Important roles of family support

Family support is important during the high school years, as this is a crucial time for exploring future career paths.

Nota, Ferrari, Solberg, and Soresi (2007)¹²⁾ researched the relationship between career search self-efficacy and family support. They analyzed whether career search self-efficacy could mediate the relationship between family support and career decision-making using a sample of 253 Italian youths (mostly high school students). The results of the analysis indicated that family support plays a role in career decision-making through career search self-efficacy, and they verified family support is an important predictor of career decision-making.

3. Relationship between personality and career self-efficacy

Career self-efficacy correlates with personality: extraversion, openness to experience and conscientiousness, etc. It is important to clarify the relationship between personality traits and career self-efficacy.

Turda (2024)¹³⁾ researched the relationship between personality and career decision-making self-efficacy in 300 Romanian teenagers. Turda used Career Decision-Making Self-Efficacy Short Form Scale (CDMSE-SF) which measured confidence in one's ability to make optimal career decisions, containing 25 items rated on a Likert scale from 1 to 5. Turda found out that the career decision-making

self-efficacy correlates statistically significant positive factors: the conscientiousness personality, the process of self-evaluation, obtaining information about self and professions, setting goals, solving problems, and career planning.

4. Surveys on a large number of subjects

It is difficult for experts to intervene in career education practice when large surveys are planned. As surveys with large numbers of subjects are significant, to review such large surveys are important.

Pedditzi, Nonnis, and Fadda (2023)¹⁴⁾ analyzed differences in decision-making, self-efficacy and life satisfaction with future choice intentions in a sample of 2,104 secondary school students in Italy. Student's choice of school transition is relevant to self-efficacy because secondary education in Italy lasts 8 years and is divided into two stages: lower secondary school or middle school (ages 11-14) and upper secondary school or high school (ages 14-19). Their research results showed significant differences in self-efficacy and school satisfaction in relation to the age at which school transition occurred.

In relation to school transition, there were differences in self-efficacy scores concerning the type of future career choice, with students who wanted to go to college scoring significantly higher in self-efficacy. There were also differences by age in self-efficacy in problem solving, with younger students scoring significantly lower, but no interaction effect with gender was found.

5. Use of CDESES-SF

The Career Decision Self-Efficacy Scale (CDESES^{Note3)} originally proposed 50 items and examined the factor structure. As mentioned above, the short form with 25 items is often used after considering the research purpose and factor structure. The scale of the Career Decision Self-Efficacy Scale Short Form (CDESES-SF) has been used in many countries.

Presti et al. (2013)¹⁵⁾ evaluated the factor structure of CDSES-SF in a sample of Italian high school students. They carried out this study and surveyed 3,390 students, taking into account studies of CDSES-SF conducted outside the United States. They carried out a confirmatory factor analysis, and verified the validity of the five-factor model. CDSES-SF is a valuable aid in identifying issues of career decisions.

6. Meta-analysis study

As shown above, research on career development and career self-efficacy has been examined. In addition, a study has been conducted that comprehensively analyzed several studies on the relationship between career development and self-efficacy.

Abdullah (2023)¹⁶⁾ conducted a comprehensive analysis of several studies on career development. He reviewed 11 research studies that conducted questionnaire surveys on self-efficacy in career decision-making and career maturity. The 11 studies reviewed by Abdullah included 164 to 395 examinees, totaling 3,255 people, ranging from high school students to college students. These 11 research studies used statistical analysis to clarify how self-efficacy and career maturity are involved in the career decision-making process. He used a meta-analysis method to examine the effect sizes of these 11 research studies and revealed that self-efficacy in career decision-making is supported by career maturity. Abdullah concluded that there was a relationship between career decision making self-efficacy and career maturity.

V. Conclusion

This study has focused on career education in high schools and has focused on the career self-efficacy of high school students. In this study, nine papers were selected on the viewpoint which accurately used the scale of career self-efficacy. Based on the results of

review, the trends of the career self-efficacy research were revealed.

The previous research reviewed in this study has provided suggestions for future research on career education and career self-efficacy. Specifically, well-designed experiential career education is effective in improving the career decision-making self-efficacy. The integration of experiential and academic components is an important factor in effective career education. And it was made clear that engaging in the exercise has a positive influence on the student's career self-efficacy. The results also suggest that the introduction of career guidance workshops into career education is meaningful with regard to career self-efficacy.

As a result of this study, it was possible to obtain significant suggestions from research on the efficacy of career education practice and research that verified the effectiveness by having experts' intervention in career education programs.

Notes:

^{Note1} Career education is defined as “education that supports the career development of each individual child and student, and fosters the motivation, attitudes and abilities necessary to build a career that is appropriate for each individual,” and more simply, it is “education that fosters each individual student’s view of work and career.” Mochizuki(2011)¹⁷⁾ clarified the history of career education in Japanese high school. And Fujita(2011)¹⁸⁾ pointed out the future tasks of Japan’s career education promotion policies.

^{Note2} APA PsycInfo is psychology-related databases provided by the American Psychological Association (APA). It is a large resource dedicated to peer-reviewed articles in the fields of behavioral science and mental health.

ERIC (Education Resources Information Center) is an authoritative database of indexed, full-text educational literature and resources. It is supported by the Institute of Education Sciences, which is part of the U.S. Department of Education.

PubMed is comprised of biomedical literature, life science journals, and online books, etc. It is provided by the U.S. National Library of Medicine.

TRC (Teacher Reference Center) is a database for educators covering major topics in education, including the latest educational research. It is opened by EBSCO for teachers involved in education from kindergarten to high school.

Web of Science (WoS) is a database that can be used to search for academic papers overseas. It contains selected article information from influential academic journals around the world.

^{Note3} The name of the career self-efficacy measurement scale, Career Decision Self-Efficacy Scale (CDSES), Career Decision Self-Efficacy Scale Short Form (CDSES-SF), Career Decision-Making Self-Efficacy (CDMSE), Career Decision-Making Self-Efficacy Short Form (CDMSE-SF)) and other abbreviations are used.

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