

Research article

# Students' perceptions of an autonomy-supportive teaching style and perceived employability: a quantitative study of Moroccan business school students

La percepción de los estudiantes sobre un estilo de enseñanza que fomenta la autonomía y la empleabilidad percibida: un estudio cuantitativo en escuelas de negocios marroquíes

**Issam Melhaoui**<sup>1</sup>: Mohammed First University, Morocco.

[issam.melhaoui@ump.ac.ma](mailto:issam.melhaoui@ump.ac.ma)

**Said Balhadj**: Abdelmalek Essaadi University, Morocco.

[sbalhadj@uae.ac.ma](mailto:sbalhadj@uae.ac.ma)

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<sup>1</sup> **Corresponding author:** Issam Melhaoui. Mohammed First University (Morocco).

## Abstract

**Introduction:** Employability is a complex and multidimensional concept that has been widely developed over the last three decades. The purpose of this study is to examine how students' perceptions of an autonomy-supportive teaching style relate to their efficacy beliefs, self-determination, self-confidence and perceived employability among Moroccan business school students. **Methodology:** This article reports the quantitative phase of an exploratory sequential mixed-methods design. A cross-sectional survey was administered online to 530 final-year students from Moroccan business schools and analysed through partial least squares structural equation modelling (PLS-SEM) in SmartPLS. **Results:** The analysis supports eight of the nine hypothesised relationships. Students' perceptions of an autonomy-supportive teaching style are positively associated with their self-efficacy, self-determination and perceived employability. Self-confidence mediates the relationships between self-determination and perceived employability and between self-efficacy and perceived employability, but no association was observed between perceived teaching style and self-confidence. **Discussion and conclusion:** Educational efforts could usefully extend beyond knowledge and generic skills to address students' interpersonal skills, feelings and behaviours, with a view to supporting the development of efficacy beliefs, personal identity and perceived employability.

**Key words:** Autonomy-supportive style; employability; efficacy beliefs; behavior regulation; self-determination; self confidence; autonomy; competence.

## Resumen

**Introducción:** La empleabilidad es un concepto complejo y multidimensional que se ha desarrollado ampliamente en las últimas tres décadas. El objetivo de este estudio es examinar cómo la percepción que los estudiantes tienen de un estilo de enseñanza que fomenta la autonomía se relaciona con sus creencias de eficacia, su autodeterminación, su confianza en sí mismos y su empleabilidad percibida, en estudiantes de escuelas de negocios marroquíes. **Metodología:** Este artículo presenta la fase cuantitativa de un diseño mixto secuencial exploratorio. Se administró en línea un cuestionario transversal a 530 estudiantes de último curso de escuelas de negocios marroquíes, analizado mediante modelos de ecuaciones estructurales por mínimos cuadrados parciales (PLS-SEM) en SmartPLS. **Resultados:** El análisis respalda ocho de las nueve relaciones planteadas. La percepción que los estudiantes tienen del estilo de enseñanza que fomenta la autonomía se asocia positivamente con su autoeficacia, su autodeterminación y su empleabilidad percibida. La confianza en uno mismo media las relaciones entre la autodeterminación y la empleabilidad percibida y entre la autoeficacia y la empleabilidad percibida, pero no se observó asociación entre el estilo de enseñanza percibido y la confianza en uno mismo. **Discusiones y conclusiones:** Los esfuerzos educativos podrían extenderse más allá de los conocimientos y las habilidades genéricas para abordar las habilidades interpersonales, los sentimientos y los comportamientos de los estudiantes, con el fin de apoyar el desarrollo de las creencias de eficacia, la identidad personal y la empleabilidad percibida.

**Palabras clave:** Estilo de apoyo a la autonomía; empleabilidad; creencias de eficacia; regulación del comportamiento; autodeterminación; confianza en uno mismo; autonomía; competencia.

## 1. Introduction

Nowadays, the landscape of higher education has evolved under the influence of globalization and socio-economic changes. Employability has become the main objective of training institutions. In a context where the important role of the university can no longer be explained, or seems paradoxical with the perceived employability (high unemployment rate, falling pedagogical supervision rate, lack of reports on the state of students' employability. Etc). It is therefore important to study and analyze employability in the Moroccan context from a pedagogical perspective.

Employability is a multidimensional concept that has been developed quite extensively over the decades, however, there is still no theoretical consensus on the definition of this concept. In our research, we focus on the student as the main unit of our analysis. Employability is thus understood in this work as an individual responsibility of the student detached from any link with the characteristics of the labor market (without however omitting the importance of this dimension in the analysis of employability). To this end, much research has attempted to study the development of employability in the university context from the individual student's perspective (Dacree Lorraine & Sewell, 2007, Harvey, 2001, knight & yorke 2004).

Consistent with the literature review, traditional pedagogy has limitations in terms of student employability.

“The fact that lectures are the dominant model raises questions about employability. By focusing essentially only on knowledge, it leaves aside practical skills and interpersonal skills, which are important elements of employability”. (Lemelin, 2014, p. 2).

From a pedagogical perspective, the new practices -student-centered demand pedagogical models- refer to a new adult psycho-pedagogy based on an emancipatory style. In this context, it appears that an autonomy supportive teaching style is correlatively associated with intrinsic motivation and a high degree of self-efficacy, whereas a controlling style leads to extrinsic motivation and a low degree of self-efficacy in students (Leroy, 2009; Leroy et al., 2013; Reeve, 2006; Reeve et al., 2004b; Sarrazin et al., 2011). the concept of “autonomy-supportive style”, has been positively related to intrinsic motivation (Reeve, Nix, & Hamm, 2003), development of student efficacy beliefs (Nadia Leroy & al 2006,2013), student engagement (Reeve, 2006,2012), well-being (Black &Deci, 2000). However, employability has rarely been linked to this concept.

In this context, our research question is as follows: how are students' perceptions of an autonomy-supportive teaching style related to efficacy beliefs, self-determination and perceived employability among business school students in Morocco?

To answer this question, we first present the literature and the theoretical model that frames this research, and then report the empirical results of a quantitative study conducted with 530 final-year students from Moroccan business schools.

## 2. Theoretical framework

### 2.1. *Autonomy supportive teaching style: the role of the teacher in motivational processes*

The works of (Leroy et al., 2013; Reeve, 2006, 2016; Ryan & Deci, 2000; Sarrazin et al., 2011) have examined the relationship between autonomy-supportive style and the motivation and academic performance of students. These highlight the importance of encouraging the latter towards autonomy; as confirmed by Reeve, (2006): “students in classrooms taught by autonomy-supportive teachers, compared to students in classrooms taught by controlling teachers, experience an impressive and meaningful range of positive educational outcomes”.

Sarrazin et al. (2011) define the autonomy-supportive teaching style as the supervisor's deliberate willingness to take into account the supervisee's point of view into account and to value all opportunities for personal growth in contrast with a constraining style, in which the supervisor's deliberate intent is to require the supervisee to think or behave in a certain way.

The teacher who supports the autonomy of their student generally tends to introduce activities that support psychological needs (Reeve, 2016). these are the vital Inner motivational resources that all students possess.

**Table 1.**

*Inner motivational resources that all students' posses*

|                 |                                                                                                                                                                                                             |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Autonomy        | The need to be the origin of one's behavior. The inner endorsement of one's thoughts (goals), feelings, and behaviors.                                                                                      |
| Competence      | The need to interact effectively with one's environmental surroundings to seek out optimal challenges, take them on, and exert persistent effort and strategic thinking to make progress in mastering them. |
| Relatedness     | The need to be involved in warm relationships. characterized by mutual concern, liking, and acceptance.                                                                                                     |
| Curiosity       | A cognitively generated emotion that occurs whenever students become aware of an unexpected gap in their knowledge that they wish to close.                                                                 |
| Interest        | An engagement-fostering emotion that occurs whenever students have an opportunity to learn something new or to develop greater understanding.                                                               |
| Intrinsic goals | Personal strivings that produce psychological need satisfaction during their pursuit. An inward focus to pursue personal growth or closer interpersonal relationships.                                      |

**Source:** Reeve, J. (2016). Autonomy-Supportive Teaching: What It Is, How to Do It. In: Liu, W., Wang, J., Ryan, R. (eds) Building Autonomous Learners. Springer, Singapore. (Reeve, 2016, p. 140).

According to Leroy and Bressoux (2010) a need-supportive motivational style is indirectly associated with the self-determination index of student motivation through students' perceptions of the motivational climate:

“The motivational style supporting needs seems to exert a positive and indirect effect on the Self-Determination Index of student motivation via the perceptions that students have of the motivational climate .... These perceptions of support ultimately reinforce their self-efficacy beliefs ( $\beta = 0.20$ )”. (Leroy and Bressoux 2010).

This was further confirmed by another study which shows the positive relationship between the autonomy-supportive teaching style and the development of self-efficacy beliefs:

“a significantly positive relationship between students' perception of their teacher's motivational style and their self-efficacy beliefs: the more students perceive their teacher's motivational style to be supportive of their needs, the more they report feeling able to accomplish the tasks offered in class ( $\beta = .22$ ).” (Leroy et al. 2013, p. 80).

## ***2.2. Development of motivational self-regulation: self-efficacy, self-determination, self - confidence***

Fenouillet's analysis of motivational theories generated several classifications on the basis of more than one hundred theories. Within this landscape, we were particularly interested in theories of prediction and behavior: The theory of achievement goals (Nicholls, 1984, 1989; Elliot, 1997), the theory of self-determination (Deci and Ryan 1985, 1991, 2000) or the hierarchical model (Vallerand 1997), the theory of self-efficacy of Bandura (Bandura 2003), the motivational dynamics (Viau, Joly, and Sherbrooke 2001). We propose in this framework of analysis to retain the following definition of motivation which seems appropriate to our research object:

“Motivation is the hypothetical construct used to describe the internal and/or external forces producing the initiation, direction and persistence of behavior” (Vallerand and Thill, 1993, p. 18).

Two theories are retained here, because of their theoretical relevance and their foundations appear in employability models: self-determination theory (Ryan and Deci 2000) and self-efficacy theory (Bandura, 2003).

Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) holds that several types of motivation can be identified and classified according to their degree of self-determination. Its lies in the possibility interest of regulating individual behavior of non-self-determined motivation to a self-determined motivation, by hindering or supporting three psychological needs: perception of autonomy, perception of competence, perception of relatedness.

Self-efficacy theory (Bandura, 1999) refers to an individual's belief in their capacity to anticipate events and to influence what they do. Human functioning is not only regulated by external stimuli alone: action can be initiated by the individual himself, self-observed and regulated so as to influence these efficacy beliefs. On this account, it can be concluded that a student's belief in their capacity to pass an examination is itself related to their capacity to do so.

“If people do not believe that they can achieve the results they desire through their actions, they have little reason to act or persevere in the face of difficulties” (Bandura, 2003, p. 7).

In a previous exploratory study conducted by us (Balhadj & Melhaoui, 2020), we observed the importance and relevance of “self-confidence” as a mediating variable. British literature review of graduate’s employability also attaches great importance to this variable (Dacre Pool et al., 2014; Dacre Pool & Sewell, 2007), which justifies the importance of self-reflection and self-regulation in the development of graduates employability.

Many psychology researchers consider 'self-confidence' to be a personality trait because it is a lasting and unchangeable characteristic of a person. From this perspective, it is challenging for students to develop self-confidence during their studies. However, as (Dacre Pool & Sewell, 2007) points out, it is possible to develop and/or improve confidence in academic institutions by analyzing self-confidence from a 'competence' perspective.

“If self-efficacy is seen as a belief that one has the capability in a particular situation, then self-confidence could be seen as the way this is projected to the outside world. Self-confidence appears to be something that can be seen from a person's manner and behavior” (Dacre Pool & Sewell, 2007, p:286).

The point, then, of this theory is that students' behavior can be influenced toward greater efficacy through four sources of self-efficacy development:

**Table 2.**

*The sources of self-efficacy with examples in mathematics context learning.*

| Sources              | Description                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mastery experience   | The interpreted result of one's own previous attainments. "Successes build a robust belief in one's efficacy. Failures undermine it, especially in earlier phases of self-development" (Bandura, 1999, p. 181). Example: “I have always been successful with math”                                                                                                                                           |
| Vicarious experience | Seeing similar others perform the same task. "If people see others like themselves succeed by sustained effort, they come to believe that they, too, have the capacity to succeed" (Bandura, 1999, p. 181). Example: “when I saw how my math teacher solves the problem, i can picture myself solving the problem in the same way”                                                                           |
| Social persuasion    | Encouragement from important others, such as parents, teachers, and friends, can increase an individual's confidence. "If people are persuaded that they have math what it takes to succeed, they exert more effort and are more perseverant than if they harbor self-doubts and dwell on personal deficiencies when problems, items example: “my math teachers have told me that I’m good at learning math” |
| Physiological state  | Students interpret their physiological arousal as an indicator of personal competence. (tension, anxiety and depression as signs of personal deficiency). Item example: “ just being in class math makes feel stressed and nervous”                                                                                                                                                                          |

**Source:** Usher, E. L., & Pajares, F. (2009), Sources of self-efficacy in mathematics: A validation study. *Contemporary Educational Psychology*, 34(1), 89-101.

### 2.3. Employability of graduates

Following Mahrane and Roger (2014), employability can be defined at several levels: at the level of society and the economy, at the level of the organization and at the level of the individual. As Hofaidhllaoui and Vatteville (2011) note, the notion of employability: “is present in the company, on the job market, and in individual strategies, particularly those developed by young graduates. In each of these universes, it covers multiple realities”.

From an educational perspective, undergraduates’ employability depends on the knowledge, skills and behaviors of future graduates’ students; The way they use them and the way they present them to the employer. University training is an important phase for acquiring the skills and individual qualities essential to the career of future graduates; Harvey (2001) argues that training institutions at least allow a “pre-employability” to develop through what is called by the author “employability development opportunities” which may eventually become into real future employability.

A robust literature has examined the individual determinants of graduate employability (Dacre Pool & Sewell, 2007; Fugate et al., 2004; Harvey, 2001; Knight & Yorke, 2004; Yorke & Knight, 2006). Three main categories of individual determinants can be distinguished: attitudes, skills and personality.

For Fugate, Kinicki (2008) and Fugate et al. (2004) a set of person-centered psychological characteristics is associated with employability, understood in this approach as a psycho-social construct that embodies individual characteristics fostering adaptive cognition, behavior, and affect, and enhance the individual-work interface.

On their part, Heijde and Van Der Heijden (2006) consider that competencies have an explanatory power, as for employability, defined in this competency-based approach as:

“Employability is the ability to perform the current job, to acquire a new job or to create work by making optimal use of existing competences”. (Heijde and Van Der Heijden, 2006, p. 453)

In this perspective, employability represents a combination of specific individual skills (related to professional expertise) and general skills (social skills and skills related to flexibility) that can be summarized in 5 essential items: occupational expertise, Anticipation and optimization, Personal flexibility, Collective spirit, Balance. Finally, the attitudinal vision of employability according to Hofaidhllaoui (2011) It emphasizes the adaptability of the individual. This can be broken down into three categories: organizational, functional, and sectoral (Hofaidhllaoui & Vatteville, 2011).

The complexity of employability has led us to retain the deconstructed aspect of all the determinants, while noting that british studies show the value of combining them. Knight and Yorke (2004) published the skills plus reports, in which the USEM set outs the idea that employability derives not only from the skills and knowledge acquired in the educational system; but also, from a set of interrelated social and psychological factors. This permits in the sense of Sumanasiri et al (2015) to best account for human complexity.

For Yorke & Knight (2004), the determining factors of the employability of graduates are based on skills, subject understanding, and personal attributes. Thus, the definition the employability can be defined as possessing a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful.

## 2.4. Hypothesis development

The hypotheses tested in this study were derived in two stages. Five relationships (H1-H5) were deduced from the literature reviewed above, which links autonomy-supportive teaching to motivational processes and, in turn, to employability perceptions. A prior exploratory qualitative phase conducted with business school students then led us to enrich this initial model with a fourth construct, self-confidence, which respondents consistently described as an outcome of their academic experience and as a resource mobilised when projecting themselves into the labour market. Four further direct relationships (H6-H9) and three mediation hypotheses (H1m-H3m) follow from this inductive addition.

Distinguishing the two sources matters for the interpretation of the results: the deductively derived paths tested here in a new national context, whereas the inductively derived paths are tested for the first time. Self-confidence, operationalized through rosenberg's (1979) self esteem framework, is theoretically distinct from self-efficacy (the former refers to a global sense of personal worth, the latter to task specific capability beliefs). This variable is introduced as a mediating construct whose relevance the present study sets out to test rather than to assume. All hypotheses are stated in associational terms. The study uses a cross-sectional design with self-reported data, which does not permit causal inference; PLS-SEM does not convert an observational cross-sectional design into a causal one.

**Table 3.**

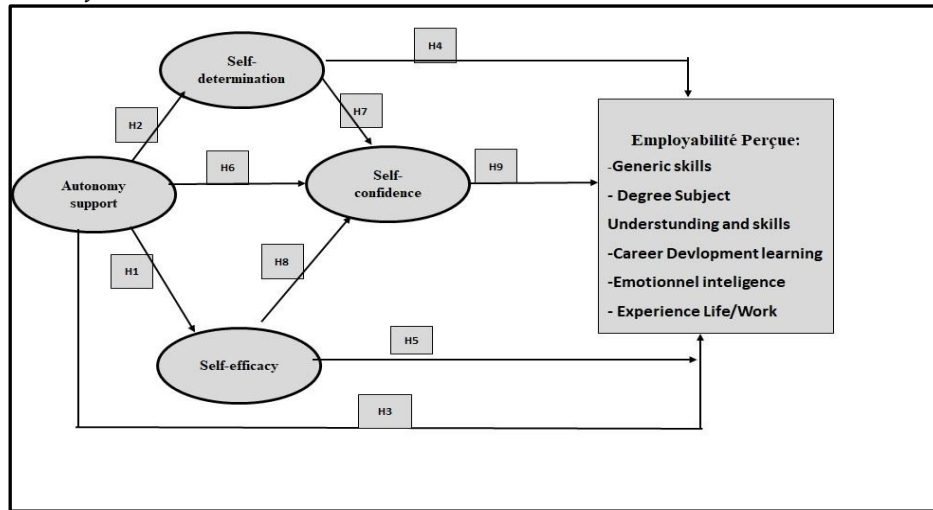
### *Hypotheses of the research model*

|     | Hypothesis                                                                                                   | Source            |
|-----|--------------------------------------------------------------------------------------------------------------|-------------------|
| H1  | Students' perceived autonomy-supportive teaching style is positively associated with self-efficacy.          | Literature        |
| H2  | Students' perceived autonomy-supportive teaching style is positively associated with self-determination.     | Literature        |
| H3  | Self-determination is positively associated with perceived employability.                                    | Literature        |
| H4  | Self-efficacy is positively associated with perceived employability.                                         | Literature        |
| H5  | Students' perceived autonomy-supportive teaching style is positively associated with perceived employability | Literature        |
| H6  | Students' perceived autonomy-supportive teaching style is positively associated with self-confidence         | Qualitative phase |
| H7  | Self-determination is positively associated with self-confidence                                             | Qualitative phase |
| H8  | Self-efficacy is positively associated with self-confidence                                                  | Qualitative phase |
| H9  | Self-confidence is positively associated with perceived employability                                        | Qualitative phase |
| H1m | Self-confidence mediates the relationship between perceived teaching style and perceived employability       | Qualitative phase |
| H2m | Self-confidence mediates the relationship between self-determination and perceived employability             | Qualitative phase |
| H3m | Self-confidence mediates the relationship between self-efficacy and perceived employability                  | Qualitative phase |

**Source:** Author's elaboration (2025).

**Figure 1.**

*Conceptual model of the research*



**Source:** Author's elaboration (2025).

### 3. Methodology

In order to verify the relevance of our theoretical model, we conducted a quantitative study following the method of structural equations, the PLS approach was preferred considering the exploratory character of our theoretical model which has not been the subject of empirical study in the Moroccan context.

#### 3.1. Research design

This article reports the quantitative phase of an exploratory sequential mixed-methods design. A preliminary qualitative phase served to verify the relevance of the constructs identified in the literature in the Moroccan context and to identify any construct that the literature had not anticipated.

Fifteen semi-structured interviews were conducted with final-year students from six ENCG campuses (Tangier, Kenitra, Casablanca, Oujda, Agadir and Fez), seven women and eight men, aged 20 to 25. Sample size was governed by theoretical saturation: interviewing stopped once additional interviews no longer yielded new themes. Interviews lasted 25 minutes on average, were audio-recorded and transcribed verbatim. They were conducted in French, with respondents free to switch to Arabic where this helped them articulate an idea; passages in Arabic were translated by the first author and independently verified by two other people, one of them a teacher of French. Transcripts were analysed through thematic content analysis in NVivo 12 Plus.

The analysis confirmed the relevance of the constructs drawn from the literature and surfaced one construct that the initial model did not contain: self-confidence, which emerged inductively as a free node and was referred to 55 times across the corpus. Respondents consistently positioned it as a bridge between their classroom experience and their sense of being employable. The initial five-hypothesis model was therefore enriched as set out in Section 2.4.

The quantitative phase reported here is cross-sectional. The PLS approach was preferred for three reasons: the exploratory character of the model, which has not previously been tested empirically in the Moroccan context; the complexity of the model, which includes four endogenous constructs estimated simultaneously; and the non-normality of the observed distributions, which makes a non-parametric estimation method appropriate (Hair et al., 2017).

### ***3.2. Procedure and participants***

The target population consisted of final-year students enrolled in Moroccan business schools. Final-year students were selected because they are best positioned both to report perceptions of the pedagogical climate experienced during their studies and to hold formed beliefs about their own employability as labour-market entry approaches. The target population was estimated at 8,868 students. As the ministry does not publish enrolment figures for final-year students specifically, this estimate was derived from published graduate counts for the 2020 cohort, used as a proxy for 2019 final-year enrolment, in both the public and private sectors (Ministère de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation, 2020).

As no centralised directory of business school students exists in Morocco, a sampling frame of 1,200 students was assembled from three sources: contacts established during the preceding qualitative phase, faculty members who agreed to forward the survey link to their students, and student groups on social media. A non-probability sampling design combining convenience and snowball sampling was used. The study therefore does not claim statistical representativeness of the Moroccan business school student population, and its findings should be interpreted as applying to the sample obtained rather than generalised to that population. Inclusion criteria were: being enrolled in the final year of a programme delivered by a Moroccan business school, and providing voluntary informed consent. Participation was anonymous and respondents were informed of the confidentiality of their answers.

Data were collected over a six-month period in 2020 through a self-administered online questionnaire. An online mode was chosen because the target population is geographically dispersed across Morocco and because face-to-face administration was not feasible during the health crisis. In a first wave, the questionnaire was sent by email to the 1,200 students of the sampling frame, together with a covering message presenting the aim of the study, the confidentiality commitment and a brief definition of each construct; this wave yielded 123 responses, a response rate of 10.3 % for the email-based portion of the collection. As this volume was insufficient for the intended analysis, the questionnaire was subsequently disseminated through student groups on social media, yielding 409 additional responses. Because this second channel involved open dissemination, the number of students exposed to the invitation cannot be determined, and an overall response rate cannot therefore be computed. In total, 530 usable responses were obtained, representing approximately 6 % of the estimated target population.

Sample size adequacy was assessed against the rule of thumb for PLS-SEM, according to which the number of observations should be at least ten times the largest number of indicators loadings on a single construct, and at least ten times the largest number of structural paths directed at a given endogenous construct (Chin, 1998). With 530 observations, the model satisfies this criterion with a substantial margin.

Women account for 64,7% of respondents (n=343) and men for 35,3% (n=187), a distribution consistent with the higher enrolment of female students in business and management programmes in Morocco. Public institutions predominate (76,6%, n=406), followed by private (13,2%, n=70) and semi-public institutions (10,2%, n=54). By institution, students from the ENCG network form the largest group, which is consistent with the twelve ENCG campuses operating nationwide and with the tuition-free status of this public network.

**Table 4.**

*Distribution of respondents by institution.*

| <b>Institution</b> | <b>N</b> | <b>%</b> |
|--------------------|----------|----------|
| <b>ENCG</b>        | 295      | 55,7     |
| <b>HEM</b>         | 108      | 20,4     |
| <b>UIR</b>         | 52       | 9,8      |
| <b>ISCAE</b>       | 33       | 6,2      |
| <b>ESCA</b>        | 26       | 4,9      |
| <b>EMSI</b>        | 10       | 1,9      |
| <b>Other</b>       | 6        | 1,1      |
| <b>Total</b>       | 530      | 100      |

**Source:** Author's elaboration (2025).

### **3.3. Measures and instrument adaptation**

The scales for the constructs were ones that already existed. Most of them came from Anglo Saxon settings; they were translated into French using the blind parallel translation procedure (Usunier, 1992): Two faculty members each translated the items on their own and then the results were compared to sort out the differences until a version was settled on.

All items were rated on a five-point likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree) to limit respondent fatigue. This departs from the seven-point format of the source instruments and constitutes a deliberate adaptation: the questionnaire comprised 43 items and was self-administered online. We acknowledge that this reduces response variance relative to the original instruments and note it as a limitation

**Perceived autonomy-supportive teaching style:** This construct was operationalised along two dimensions. Perceived autonomy was measured with a seven-item adaptation of the short form of the Learning Climate Questionnaire (Williams & Deci, 1996), an instrument designed for students to report how they perceive their instructors' support for their autonomy. Perceived competence was measured with the Perceived Competence Scale (Williams & Deci, 1996), originally four items, of which three were retained following the exploratory qualitative phase, one item having proved not to be meaningful to Moroccan respondents.

Both scales are completed by students and refer to the teacher they had in mind while answering; items are worded from the student's standpoint, for example "My teacher encourages me to ask questions." The construct therefore captures the perceived autonomy-supportive climate as experienced and reported by students, not a teaching style self-reported by teachers. No teacher was surveyed in this study.

**Self-efficacy:** Measured with the academic scale of Leroy and Bressoux (2010) and Leroy et al. (2013), itself derived from the Motivated Strategies for Learning Questionnaire (Pintrich & De Groot, 1990) and the Perceived Competence Scale (Williams & Deci, 1996), reported with a Cronbach's alpha of .79. Of its five items, three were retained after the qualitative phase indicated that two were not meaningful to respondents in this context.

**Self-determination:** Measured with six items from the Échelle de Motivation en Éducation (Vallerand et al., 1989), an instrument adapted to different levels of study and to the field of education and already used in Morocco with a reported alpha of .87 (Côme & Yaakoubd, 2015). Three items were retained after the exploratory factor analysis.

**Self-confidence:** Measured with items adapted from Rosenberg's (1979) self-esteem scale, conceptualised here as a unidimensional construct capturing self-respect and self-regard, as operationalised by Eggleston et al. (2011), who report a Cronbach's alpha of .66. This value falls below the conventional .70 threshold; we therefore rely on the composite reliability obtained in the present data, reported in Section 4.1, for the assessment of this scale.

**Perceived employability:** Operationalised using the CareerEDGE Employability Development Profile (Dacre Pool et al., 2014). The original instrument comprises 28 items rated on a seven-point scale and was validated on 807 undergraduate students; exploratory and confirmatory factor analyses supported a five-factor structure, two items loading below .40 being discarded and a 26-item version being recommended for research use, with subscale alphas ranging from .63 to .83.

Perceived employability was modelled as a reflective-reflective second-order construct: the five dimensions are first-order latent variables measured by their respective items, and perceived employability is a second-order latent variable reflected by the five dimensions. The same specification was applied to perceived teaching style, modelled as a second-order construct reflected by its two dimensions. The two-stage approach was used: the first-order dimensions were estimated in a first run, and their latent variable scores then served as indicators of the second-order construct.

This specification follows the conceptualisation of employability as a multidimensional set of interrelated attributes rather than an index formed by independent components. It should be noted that Dacre Pool et al. (2014) model the five dimensions as correlated first-order factors and do not specify a higher-order employability construct; the hierarchical specification adopted here is therefore ours, and rests on the theoretical argument that the five dimensions are manifestations of a common employability perception rather than independent components of it.

### ***3.4. Exploratory factor analysis***

In order to purify and validate the measurement scales, we opted for principal component analysis (PCA). By this method, we purified our scales and retained only the variables with a factorial contribution higher than 0.5. Following Hair et al. (2013), a threshold of .60 was adopted for Cronbach's alpha, this value being considered acceptable in exploratory research, which is the status of the present model in the Moroccan context.

All scales meet this criterion. Composite reliability, which is the reliability measure recommended for PLS-SEM because it does not assume equal indicator weighting, exceeds .70 for every construct and is reported in Section 4.1. Before starting to analyse the data, two statistical tests are essential to study factorability, namely the Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity.

**Table 5.**

*Summary of PCA results*

| Construct                       | KMO  | Bartlett's test          | Items retained | Explained variance | Cronbach's $\alpha$ |
|---------------------------------|------|--------------------------|----------------|--------------------|---------------------|
| <b>Perceived employability</b>  |      |                          |                |                    |                     |
| Emotional intelligence          | .790 | 615.505 ( $p < .001$ )   | 3              | 60,96 %            | .674                |
| Academic performance            | .720 | 70.339 ( $p < .001$ )    | 4              | 61.70 %            | .789                |
| Career development learning     | .715 | 98.753 ( $p < .001$ )    | 4              | 63.17 %            | .804                |
| Problem-solving skills          | .642 | 279.965 ( $p < .001$ )   | 3              | 61.77 %            | .681                |
| Work and life experience        | .749 | 92.407 ( $p < .001$ )    | 2              | 68.28 %            | .791                |
| <b>Self-confidence</b>          | .638 | 250.663 ( $p < .001$ )   | 3              | 60.31 %            | .671                |
| <b>Self-efficacy</b>            | .686 | 343.060 ( $p < .001$ )   | 3              | 65.63 %            | .734                |
| <b>Self-determination</b>       | .671 | 311.374 ( $p < .001$ )   | 3              | 63.99 %            | .717                |
| <b>Perceived teaching style</b> |      |                          |                |                    |                     |
| Perceived autonomy              | .906 | 2,328.139 ( $p < .001$ ) | 7              | 65.46 %            | .909                |
| Perceived competence            | .703 | 524.268 ( $p < .001$ )   | 3              | 72.08 %            | .806                |

**Source:** Author's elaboration (2025).

## 4. Results

In order to present the results of our study, we first proceed to the test of the measurement model; to do this, we need to ensure convergent validity and discriminant validity in conformity with the recommendations of (Balambo 2015).

#### 4.1. Convergent validity

**Table 6.**

*Validity and reliability of scales measuring the variable “perceived employability”*

| Construct               | Dimension                   | Item              | Loading | rho_A | CR   | AVE  |
|-------------------------|-----------------------------|-------------------|---------|-------|------|------|
| Perceived employability | Emotional intelligence      |                   |         | .691  | .823 | .608 |
|                         |                             | Emp_Emotionnelle1 | .829    |       |      |      |
|                         |                             | Emp_Emotionnelle2 | .785    |       |      |      |
|                         |                             | Emp_Emotionnelle6 | .722    |       |      |      |
|                         | Career development learning |                   |         | .806  | .872 | .631 |
|                         |                             | Emp_Car1          | .810    |       |      |      |
|                         |                             | Emp_Car2          | .855    |       |      |      |
|                         |                             | Emp_Car3          | .759    |       |      |      |
|                         |                             | Emp_Car4          | .750    |       |      |      |
|                         | Academic performance        |                   |         | .794  | .865 | .616 |
|                         |                             | Emp_AcaD1         | .814    |       |      |      |
|                         |                             | Emp_AcaD2         | .809    |       |      |      |
|                         |                             | Emp_AcaD3         | .732    |       |      |      |
|                         |                             | Emp_AcaD4         | .780    |       |      |      |
|                         | Problem-solving skills      |                   |         | .698  | .828 | .617 |
|                         |                             | Reso1             | .784    |       |      |      |
|                         |                             | Reso2             | .844    |       |      |      |
|                         |                             | Reso3             | .724    |       |      |      |
|                         | Work and life experience    |                   |         | .807  | .907 | .831 |
|                         |                             | Exp1              | .899    |       |      |      |
|                         |                             | Exp2              | .924    |       |      |      |

**Note:** Thresholds: loadings  $\geq .70$ , rho\_A  $\geq .70$ , CR  $\geq .70$ , AVE  $\geq .50$ .

**Source:** Author’s elaboration (2025).

All loadings exceed the .70 threshold. The rho\_A value for emotional intelligence (.691) and for problem-solving skills (.698) fall marginally below .70; given that composite reliability exceeds .82 and AVE exceeds .60 for both dimensions, we retained them. Composite reliability and average variance extracted exceed their respective thresholds for all five dimensions, supporting the reliability and convergent validity of the perceived employability scale.

The teaching style variable is also considered as a second order variable that undergoes the same treatment. The following table displays the results as follows.

**Table 7.**

*Validity and reliability of the teaching style variable*

| Construct      | Dimension             | Items  | Loading $\geq 0.70$ | Rho_A $\geq 0.7$ | CR           | AVE $\geq 0.5$ |
|----------------|-----------------------|--------|---------------------|------------------|--------------|----------------|
|                |                       |        |                     | <b>0.916</b>     | <b>0.929</b> | <b>0.655</b>   |
|                |                       | Auto1  | 0.812               |                  |              |                |
|                |                       | Auto2  | 0.833               |                  |              |                |
|                |                       | Auto3  | 0.767               |                  |              |                |
|                | Autonomy perception   | Auto4  | 0.655               |                  |              |                |
| Teaching style |                       | Auto5  | 0.829               |                  |              |                |
|                |                       | Auto6  | 0.854               |                  |              |                |
|                |                       | Auto7  | 0.891               |                  |              |                |
|                |                       |        |                     | <b>0.859</b>     | <b>0.883</b> | <b>0.716</b>   |
|                |                       | Compé1 | 0.762               |                  |              |                |
|                | Competence perception | Compé2 | 0.901               |                  |              |                |
|                |                       | Compé3 | 0.869               |                  |              |                |
|                |                       |        |                     |                  |              |                |

**Source:** Author's elaboration (2025).

Based on the table, we can notice that all loadings have a value greater than 0.70 except for the item "Auto N°4" which has a value less than 0.70. In this case, Hair et al. (2017) recommend deleting the items that have a value between 0.40 and 0.70 if their deletion will positively influence the value of Rho\_A and AVE. In our case, deleting this item has no positive influence on these values, so we decided to keep it. In another sense, the value of Rho\_A, and the values of the composite reliability and the average shared variance (AVE) are significant. Consequently, we can say that, the reliability and convergent validity of the teaching style measurement scale are verified. For the rest of the variables, the table below summarizes the results obtained.

**Table 8.**

*Validity and reliability of remaining variables*

| Construct          | Items      | Loading $\geq 0.70$ | Rho_A $\geq 0.7$ | CR    | AVE $\geq 0.5$ |
|--------------------|------------|---------------------|------------------|-------|----------------|
|                    |            |                     | 0.740            | 0.851 | 0.656          |
| Self efficacy      | Auto_effi1 | 0.825               |                  |       |                |
|                    | Auto_effi2 | 0.799               |                  |       |                |
|                    | Auto_effi3 | 0.807               |                  |       |                |
|                    |            |                     | 0.699            | 0.819 | 0.602          |
| Self confidence    | Trust1     | 0.699               |                  |       |                |
|                    | Trust2     | 0.812               |                  |       |                |
|                    | Trust3     | 0.813               |                  |       |                |
|                    |            |                     | 0.724            | 0.840 | 0.637          |
| Self-determination | Deter 1    | 0.815               |                  |       |                |
|                    | Deter 4    | 0.811               |                  |       |                |
|                    | Deter 5    | 0.768               |                  |       |                |

**Source:** Author's elaboration (2025).

Self-efficacy item Auto\_effi1 loads at .825, self-confidence items range from .699 to .813 and self-determination items from .768 to .815. All composite reliability and AVE values exceed their thresholds, supporting the reliability and convergent validity of the self-efficacy, self-confidence and self-determination scales.

#### 4.2. Discriminant analysis

According to the criterion of Fornell and Larcker, the square root of the AVE of a construct is compared with the strongest existing correlation between this same construct and the others of the same model. The square root of the AVE must therefore be superior to the strongest existing correlation. The table below shows the results of our study

**Table 9.**

##### *Discriminant validity of the constructs*

|                      | Auto-détermination | Auto-efficacité | Confiance en soi | Employabilité | Style d'enseignement |
|----------------------|--------------------|-----------------|------------------|---------------|----------------------|
| Auto-détermination   | 0.798              |                 |                  |               |                      |
| Auto-efficacité      | 0.408              | 0.810           |                  |               |                      |
| Confiance en soi     | 0.496              | 0.529           | 0.776            |               |                      |
| Employabilité Perçue | 0.410              | 0.612           | 0.520            | 0.618         |                      |
| Style d'enseignement | 0.187              | 0.355           | 0.268            | 0.502         | 0.677                |

**Source:** Author's elaboration (2025).

The square roots of the AVEs of the different constructs mobilized are all well superior to the correlations of these constructs with the others. This indicates a good level of discriminant validity.

We acknowledge that the heterotrait-monotrait ratio of correlations (Henseler et al., 2015) has since become the recommended criterion for assessing discriminant validity in variance-based structural equation modelling. The analysis reported here was conducted in 2020, before HTMT reporting became standard practice in this literature, and the original data file is no longer accessible, which prevents us from computing it retrospectively. The same constraint applies to the bias-corrected bootstrap confidence intervals of the path coefficients and of the specific indirect effects. We report these limitations explicitly rather than omit the criteria silently.

#### 4.3. Structural model

Perceived employability shows the highest explanatory power  $R^2 = .517$ ; self-confidence  $R^2 = .379$  and self-efficacy  $R^2 = .126$ . Self-determination shows a low value ( $R^2 = .035$ ), meaning that the model accounts for approximately 3.5% of its variance.

$R^2$  is a measure of explanatory magnitude, not a test of statistical significance, and we therefore do not characterise these values as significant or non-significant. The low  $R^2$  for self-determination warrants specific comment. Although the path from perceived teaching style to self-determination is statistically significant ( $\beta = .187$ ,  $t = 4.822$ ,  $p < .001$ ), its effect size is small ( $f^2 = .036$ ) and the construct's variance remains largely unexplained by the single predictor specified in our model.

Self-determination is theorised as being shaped by a wide range of influences beyond the classroom climate – family, prior educational trajectory, vocational interests – none of which were modelled here. This result therefore qualifies rather than contradicts our argument: perceived teaching style is reliably but modestly associated with self-determination in this sample, and claims about its role in student motivation should be stated accordingly.

Stone-Geisser  $Q^2$  values obtained through blindfolding are positive for all four endogenous constructs, indicating that the model has predictive relevance.

**Table 10.**

*Explanatory power and predictive relevance of endogenous constructs*

| Construct               | $R^2$ | $Q^2$ |
|-------------------------|-------|-------|
| Self-determination      | .035  | .021  |
| Self-efficacy           | .126  | .081  |
| Self-confidence         | .379  | .221  |
| Perceived employability | .517  | .195  |

**Source:** Author's elaboration (2025).

**Table 11.**

*Structural model results*

| H  | Path                                               | $\beta$ | t     | p      | $f^2$ | Result        |
|----|----------------------------------------------------|---------|-------|--------|-------|---------------|
| H1 | Perceived teaching style → Self-efficacy           | .355    | 8.815 | < .001 | .144  | Supported     |
| H2 | Perceived teaching style → Self-determination      | .187    | 4.822 | < .001 | .036  | Supported     |
| H3 | Self-determination → Perceived employability       | .111    | 2.873 | .004   | .019  | Supported     |
| H4 | Self-efficacy → Perceived employability            | .357    | 8.471 | < .001 | .171  | Supported     |
| H5 | Perceived teaching style → Perceived employability | .302    | 8.303 | < .001 | .164  | Supported     |
| H6 | Perceived teaching style → Self-confidence         | .076    | 1.909 | .057   | .008  | Not supported |
| H7 | Self-determination → Self-confidence               | .333    | 7.178 | < .001 | .148  | Supported     |
| H8 | Self-efficacy → Self-confidence                    | .366    | 9.321 | < .001 | .163  | Supported     |
| H9 | Self-confidence → Perceived employability          | .195    | 4.841 | < .001 | .049  | Supported     |

**Source:** Author's elaboration (2025).

Eight of the nine direct hypotheses are supported. H6 is not supported: the association between perceived teaching style and self-confidence does not reach conventional significance ( $p = .057$ ) and its effect size is negligible ( $f^2 = .008$ ).

The largest effect sizes are observed for the paths from self-efficacy to perceived employability ( $f^2 = .171$ ), from perceived teaching style to perceived employability ( $f^2 = .164$ ), from self-efficacy to self-confidence ( $f^2 = .163$ ) and from self-determination to self-confidence ( $f^2 = .148$ ), all of which fall in the small-to-medium range. The remaining paths show small to medium effects.

#### 4.4. Mediation analysis

Mediation was assessed following the bootstrapping procedure recommended by Preacher and Hayes (2008), under which an indirect effect is supported when it is statistically significant and its bootstrap confidence interval does not include zero. Three mediation hypotheses were tested, all specifying self-confidence as the mediator (M) and perceived employability as the outcome (Y), and differing only in the antecedent (X).

**Table 12.**

##### *Mediation analysis result*

| H   | Mediation X → M → Y                                                  | Path a | Path b | Indirect effect | t     | p      | Result        |
|-----|----------------------------------------------------------------------|--------|--------|-----------------|-------|--------|---------------|
| H1m | Perceived teaching style → Self-confidence → Perceived employability | .076   | .195   | .015            | 1.803 | .072   | Not supported |
| H2m | Self-determination → Self-confidence → Perceived employability       | .333   | .195   | .065            | 3.971 | < .001 | Supported     |
| H3m | Self-efficacy → Self-confidence → Perceived employability            | .366   | .195   | .070            | 4.042 | < .001 | Supported     |

**Source:** Author's elaboration (2025).

As with the direct paths, bias-corrected bootstrap confidence intervals for the specific indirect effects could not be retrieved, for the reason set out in Section 4.2. Significance is therefore assessed on the bootstrap t-statistics and p-values reported above.

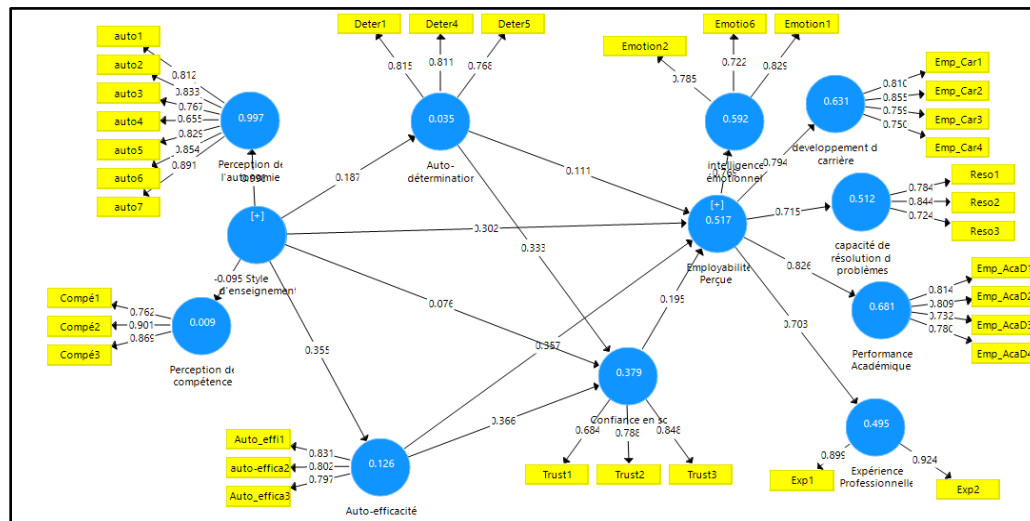
Two of the three mediation hypotheses are supported. Self-confidence transmits an indirect effect from self-determination to perceived employability (indirect effect = .065,  $t = 3.971$ ,  $p < .001$ ) and from self-efficacy to perceived employability (indirect effect = .070,  $t = 4.042$ ,  $p < .001$ ). In both cases the direct paths from X to Y also remain significant (H3:  $\beta = .111$ ,  $p = .004$ ; H4:  $\beta = .357$ ,  $p < .001$ ), which indicates partial rather than full mediation: self-confidence accounts for part of the association between each motivational process and perceived employability, but not all of it.

H1m is not supported. The indirect effect from perceived teaching style to perceived employability through self-confidence is not significant ( $t = 1.803$ ,  $p = .072$ ). This result is consistent with, rather than contradictory to, the rejection of H6: since no association is observed between perceived teaching style and self-confidence (path a,  $\beta = .076$ ,  $p = .057$ ), no indirect effect can be transmitted through that mediator. The two results converge on the same conclusion.

It should be emphasised that perceived teaching style is not the antecedent in the two supported mediation models. Self-confidence mediates the relationships originating from the two motivational processes, not from the pedagogical climate. Perceived teaching style nonetheless remains directly and significantly associated with perceived employability (H5,  $\beta = .302$ ,  $p < .001$ ).

**Figure 2.**

*Final structural model*



**Source:** Author's elaboration (2025).

## 5. Discussion

This study examined the relationship between students' perceptions of an autonomy-supportive teaching style and their perceptions of their own employability in Moroccan business schools. A large body of theoretical and empirical work in the Francophone world focuses on employability from the perspective of the labour market, in an interactive approach. This research instead studies employability from the perspective of the individual student.

From a theoretical perspective, individual employability is understood here, beyond a purely economic and managerial view, as a set of interrelated social and psychological factors (Knight & Yorke, 2004; Yorke & Knight, 2006). Research on employability appears heavily oriented towards meeting the needs of the economy, and it is worth asking what an education entirely subordinated to that end would leave out.

Employability as shaped by the educational system stands at the centre of a pedagogical model oriented towards emancipation and the development of individual attributes. The contribution of this work lies in integrating individual factors — beliefs and behaviours — into the analysis of employability, without denying the importance of economic and managerial influences.

From a pedagogical point of view, the results are consistent with the proposition that teachers who support students' psychological needs are associated with the development of efficacy beliefs, engagement and self-determination. The association observed between perceived teaching style and perceived employability (H5) is one of the stronger relationships in the model, and holds alongside the indirect associations transmitted through self-efficacy and self-determination.

Self-efficacy shows the strongest association with perceived employability ( $\beta = .357$ ), ahead of perceived teaching style ( $\beta = .302$ ) and well ahead of self-determination ( $\beta = .111$ ). This ordering is consistent with the employability literature, which treats self-efficacy as a central reflective and evaluative component of employability (Dacre Pool et al., 2014; Yorke & Knight, 2006).

The absence of an observed association between perceived teaching style and self-confidence (H6, H1m) runs counter to the exploratory qualitative phase, in which respondents described the pedagogical climate as shaping their confidence. Self-confidence in this model is instead associated with the two motivational processes. One plausible reading is that the pedagogical climate is related to self-confidence indirectly, through self-efficacy and self-determination, rather than directly; another is that a moderating variable not modelled here conditions the relationship.

Both readings are testable and neither can be adjudicated with the present cross-sectional data the low explanatory power for self-determination ( $R^2 = .035$ ) indicates that classroom climate accounts for only a small share of the variance in this construct. Self-determination is theorised as multi-determined, and a model restricted to the pedagogical context cannot be expected to account for much of it. This tempers, without invalidating, claims about the motivational reach of teaching style.

## 6. Conclusion

Research on employability appears heavily oriented towards the needs of the economy. This study invites researchers to take an interest in employability in its educational and pedagogical dimension, since beyond material shortcomings, university education carries a share of responsibility-often overlooked-for the development of students' and graduates' employability. Students' psychosocial perceptions appear to be an important element in understanding the factors underlying their actual employability. Constructivist and socio-constructivist perspectives seem promising complements to the socio-cognitive framework adopted here, in which perceptions of employability are treated as predictors of actual employability.

Several limitations qualify these findings. The design is cross-sectional and relies on self-reported data collected at a single point in time. No causal inference can be drawn from the associations reported here, and the direction of the relationships is theoretically rather than empirically established. A longitudinal design, following students through their studies and into the labour market, would allow the development of employability perceptions to be analysed over time and would permit stronger inference.

Sampling was non-probabilistic, combining convenience and snowball recruitment through email and social media. The sample cannot be considered statistically representative of Moroccan business school students, and the predominance of ENCG students in particular limits generalisation to other institutional settings. Because all constructs were measured with a single self-administered instrument, common method variance cannot be ruled out as a partial source of the observed associations. The response format was also adapted from the seven-point scales of the source instruments to a five-point format, which reduces response variance relative to the original scales and may attenuate observed relationships.

Finally, the study measures perceived employability, not employment outcomes. Perceived employability is theoretically related to actual employability but is not equivalent to it, and the relationship between the two was not examined here.

## 7. References

- Balambo, M. A. (2015). The analysis of structural equation models by PLS method in research on inter-organizational relationships: The case of research in logistics. *International journal of business quatitative economics and applied management research*, 1-11.
- Balhadj, S., & Melhaoui, I. (2020). Le soutien à l'autonomie en vue d'améliorer la perception de l'employabilité des étudiants: Étude qualitative réalisée auprès des étudiants relevant des ENCG au Maroc. *Revue Internationale des Sciences de Gestion*, 3(2), 1002-1027. <https://doi.org/10.5281/zenodo.3813527>
- Bandura, A. (1999). Social cognitive theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2<sup>nd</sup> ed., pp. 154-196). Guilford Press.
- Bandura, A. (2003). *Auto-efficacité: Le sentiment d'efficacité personnelle*. De Boeck.
- Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education*, 84(6), 740-756. [https://doi.org/10.1002/1098-237X\(200011\)84:6<740::AID-SCE4>3.0.CO;2-3](https://doi.org/10.1002/1098-237X(200011)84:6<740::AID-SCE4>3.0.CO;2-3)
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295-336). Lawrence Erlbaum Associates.
- Côme, T., & Yaakoubd, A. (2015). Accès régulé à l'université et implication et motivation des étudiants: L'exemple du Maroc. *Gestion et Management Public*, 3(4), 5-26. <https://doi.org/10.3917/gmp.034.0005>
- Croutsche, J. J. (2002). Étude des relations de causalité: Utilisation des modèles d'équations structurelles (approche méthodologique). *La Revue des Sciences de Gestion: Direction et Gestion*, (198), 81-97.
- Dacre Pool, L., Qualter, P., & Sewell, P. J. (2014). Exploring the factor structure of the CareerEDGE employability development profile. *Education + Training*, 56(4), 303-313. <https://doi.org/10.1108/ET-01-2013-0009>
- Dacre Pool, L., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training*, 49(4), 277-289. <https://doi.org/10.1108/00400910710754435>
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.

- Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling*. University of Akron Press.
- Fugate, M., & Kinicki, A. J. (2008). A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change. *Journal of Occupational and Organizational Psychology*, 81(3), 503-527. <https://doi.org/10.1348/096317907X241579>
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior*, 65(1), 14-38. <https://doi.org/10.1016/j.jvb.2003.10.005>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2<sup>nd</sup> ed.). SAGE Publications.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1-2), 1-12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Harvey, L. (2001). Defining and measuring employability. *Quality in Higher Education*, 7(2), 97-109. <https://doi.org/10.1080/13538320120059990>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hofaidhllaoui, M., & Vatteville, E. (2011). *Mesurer l'employabilité des jeunes diplômés: L'exemple des titulaires de masters tunisiens* [Conference paper]. Congrès de l'AGRH, Marrakech, Morocco.
- Othmane, J. (2011). *L'employabilité : Définition, création d'une échelle de mesure et contribution à l'étude des déterminants* [Thèse de doctorat, Université Jean Moulin Lyon 3]. [https://scd-resnum.univ-lyon3.fr/out/theses/2011\\_out\\_othmane\\_j.pdf](https://scd-resnum.univ-lyon3.fr/out/theses/2011_out_othmane_j.pdf)
- Knight, P., & Yorke, M. (2004). *Learning, curriculum and employability in higher education*. RoutledgeFalmer.
- Lemelin, M. (2014). *Le rôle de la pédagogie en vue d'améliorer l'employabilité des diplômés : Le cas d'HEC Montréal* [Communication au colloque]. Colloque sur l'employabilité, Université Saint-Joseph, Beyrouth, Liban.
- Leroy, N., & Bressoux, P. (2010). *Les effets du contexte scolaire sur la motivation et ses conséquences au plan des apprentissages: Une étude transversale à l'école élémentaire* [Conference paper]. Congrès de l'Actualité de la Recherche en Éducation et en Formation (AREF), Geneva, Switzerland.

- Leroy, N., Bressoux, P., Sarrazin, P., & Trouilloud, D. (2013). Un modèle sociocognitif des apprentissages scolaires: Style motivationnel de l'enseignant, soutien perçu des élèves et processus motivationnels. *Revue Française de Pédagogie*, (182), 71-92. <https://doi.org/10.4000/rfp.4008>
- Mahrane, H., & Roger, A. (2014). Favoriser le développement de l'employabilité: Un enjeu pour les individus et pour les organisations. *Revue de Gestion des Ressources Humaines*, 93(3), 32-48. <https://doi.org/10.3917/grhu.093.0032>
- Ministère de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation. (2020). *Statistiques universitaires*. <https://www.enssup.gov.ma/fr/Statistiques>
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33-40. <https://doi.org/10.1037/0022-0663.82.1.33>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891. <https://doi.org/10.3758/BRM.40.3.879>
- Reeve, J. (2006). Teachers as facilitators: What autonomy-supportive teachers do and why their students benefit. *The Elementary School Journal*, 106(3), 225-236. <https://doi.org/10.1086/501484>
- Reeve, J. (2016). Autonomy-supportive teaching: What it is, how to do it. In W. C. Liu, J. C. K. Wang, & R. M. Ryan (Eds.), *Building autonomous learners* (pp. 129-152). Springer. [https://doi.org/10.1007/978-981-287-630-0\\_7](https://doi.org/10.1007/978-981-287-630-0_7)
- Reeve, J., Nix, G., & Hamm, D. (2003). Testing models of the experience of self-determination in intrinsic motivation and the conundrum of choice. *Journal of Educational Psychology*, 95(2), 375-392. <https://doi.org/10.1037/0022-0663.95.2.375>
- Rosenberg, M. (1979). *Conceiving the self*. Basic Books.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67. <https://doi.org/10.1006/ceps.1999.1020>
- Sarrazin, P., Pelletier, L., Deci, E. L., & Ryan, R. M. (2011). Nourrir une motivation autonome et des conséquences positives dans différents milieux de vie: Les apports de la théorie de l'autodétermination. In C. Martin-Krumm & C. Tarquinio (Eds.), *Traité de psychologie positive* (pp. 273-312). De Boeck. <https://acortar.link/jS7Yxx>
- Tenenhaus, M. (1998). *La régression PLS: Théorie et pratique*. Éditions Technip.
- Usher, E. L., & Pajares, F. (2009). Sources of self-efficacy in mathematics: A validation study. *Contemporary Educational Psychology*, 34(1), 89-101. <https://doi.org/10.1016/j.cedpsych.2008.09.002>

- Usunier, J. C. (1992). *Commerce entre cultures: Une approche culturelle du marketing international*. Presses Universitaires de France.
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 271-360). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60019-2](https://doi.org/10.1016/S0065-2601(08)60019-2)
- Vallerand, R. J., Blais, M. R., Brière, N. M., & Pelletier, L. G. (1989). Construction et validation de l'Échelle de Motivation en Éducation (EME). *Revue Canadienne des Sciences du Comportement*, 21(3), 323-349. <https://doi.org/10.1037/h0079855>
- Vallerand, R. J., & Thill, E. E. (1993). *Introduction à la psychologie de la motivation*. Éditions Études Vivantes.
- Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management*, 45(3), 449-476. <https://doi.org/10.1002/hrm.20119>
- Viau, R., & Joly, J. (2001). *Comprendre la motivation à réussir des étudiants universitaires pour mieux agir* [Conference paper]. Université de Sherbrooke, Sherbrooke, Canada.
- Wetzels, M., Odekerken-Schröder, G., & van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 33(1), 177-195. <https://doi.org/10.2307/20650284>
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70(4), 767-779. <https://doi.org/10.1037/0022-3514.70.4.767>
- Yorke, M., & Knight, P. (2006). *Employability in higher education: What it is – what it is not* (Learning and Employability Series One). Higher Education Academy.

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### Contributions of the Authors:

**Conceptualization:** Melhaoui, Issam. Balhadj, Said; **Software:** Melhaoui, Issam. Balhadj, Said; **Validation:** Melhaoui, Issam. Balhadj, Said; **Formal Analysis:** Melhaoui, Issam. Balhadj, Said; **Data curation:** Melhaoui, Issam. Balhadj, Said; **Writing-Preparation of the original draft:** Melhaoui, Issam. Balhadj, Said; **Drafting-Revision and Editing:** Melhaoui, Issam. Balhadj, Said; **Visualization:** Melhaoui, Issam. Balhadj, Said; **Supervision:** Melhaoui, Issam. Balhadj, Said; **Project Administration:** Melhaoui, Issam. Balhadj, Said; **All Authors have read and accepted the published version of the manuscript:** Melhaoui, Issam. Balhadj, Said.

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### AUTHOR/S:

#### **Issam Melhaoui**

Mohammed First University, Morocco.

[issam.melhaoui@ump.ac.ma](mailto:issam.melhaoui@ump.ac.ma)

#### **Said Balhadj**

Abdelmalek Essaadi University, Morocco.

[sbalhadj@uae.ac.ma](mailto:sbalhadj@uae.ac.ma)