


Factors influencing the choice of a university degree: the case of recreation, parks and tourism administration studies

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ABSTRACT

Iglesias-Martínez MJ, Martínez-Ruiz MA, Tortosa-Martínez J. Factors influencing the choice of a university degree: the case of recreation, parks and tourism administration studies. *J. Hum. Sport Exerc.* Vol. 7, No. 3, pp. 684-697, 2012. The aim of this research is to analyze students' expectations that have an influence on choosing Leisure and Recreation as an academic major. According to the analysis of this research on the reasons for choosing Recreation, Parks, and Tourism Administration studies at a university in the United States, the conclusions reached show that among multiple factors, the expectations of having collaborative and situated learning experiences are one of the main reasons for choosing these studies, as well as the job opportunities that this degree offers. The results of this research evidence the high degree of emotionality affecting this decision. The conclusions of this study may be useful for designing Leisure and Recreation curriculums. **Key words:** ACADEMIC MAJOR, LEISURE AND RECREATION, SITUATED LEARNING, DISTRIBUTED LEARNING.

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INTRODUCTION

This paper analyzes the expectations of students at a Midwestern University in the United States of America that lead them to choose Recreation, Parks and Tourism Administration (RPTA) studies. It is important that higher education institutions check the reasons why students choose an academic major and the students' level of satisfaction with the program. This information has important implications for recruitment of new students as well as for the retention of current students. Student's satisfaction with the program is related to higher retention rates and good word to mouth publicity, having also a positive impact on recruitment (King et al., 1999).

In this article, we present the first part of this research, related to the students' expectations for choosing recreation studies. The second part of the research is focused on the satisfaction level of the students with the degree, and the results will be presented in a later paper.

Receiving feed-back from students about their learning expectations enables institutions to understand and adapt the strengths and weaknesses in their policies, practices and procedures (Brookes, 2003). Expectations, influencing the decision of choosing an academic major, have been studied by several authors (Holland, 1996; Krumboltz et al., 1976; Krumboltz & Worthington, 1999; Super, 1990). However, there are less studies focused on the reasons for choosing a recreation major (Plumton, 2005; Raymore & Berno, 1996). Plumton (2005), in research conducted at the University of Manitoba (Canada), concluded that personal and environmental factors are more important than the social and demographic ones.

The study was based on the hypothesis that the students' expectations for choosing an academic major include assumptions about the learning process which are coincident with current theories about learning (Johnson & Johnson, 2009). The selection of the Leisure and Recreation degree as a case study is due to the similarities and common features that it shares with the Physical Activity and Sports Science degree. Furthermore, the study aims to investigate the level at which decisions for choosing an academic major are based on rational arguments of flair or rather on emotional motivations, attitudinal dispositions, and affections (Damasio, 1994, 1999).

In our previous studies (Martínez & Sauleda, 2001; Martínez et al., 2001), conducted with students in the field of Education, the main findings had highlighted that students assumed a vision of the learning process based essentially on behaviorism, and at a lower degree on cognitive theory, far distanced from conceptions that value situated and social theories of learning. Considering that participants in those studies had a specific background in Education, due to their training to become teachers, the current research allows us to compare the results with students that lack previous basic didactic knowledge in their conceptions.

Situated and collaborative learning

The deepen on teaching and learning problems requires us to question in which way the student of the 21st century experiences the learning process. According to Umberto Eco (2004, p.7), given that youth are living a social context where knowledge is poorly valued by itself or as mean for success in life, the best answer they can be given about the value of knowledge is that:

The exercise of knowledge creates relations, continuity and emotional attachments. It introduces us to parents other than our biological ones... we don't just remember our own life but the lives of others (cited in Walker, 2006, p. 3).

Learning as a developing discourse, constitutes a process developed in genuine learning communities in the classroom where the cooperative materials are processed, the meanings are discussed, and feedback from the group is received (Millis & Cottell, 1998; Johnson & Johnson, 2009). The constitution of knowledge depends not only on listening and understanding a discourse, but also on the necessary implication of the student as the engine for real learning. For this reason, and as the reflective practice depends on the context, the design of the environment of the situated learning is a significant means for assuring satisfaction in achievements. The concepts of situated cognition, distributed cognition, and learning communities, intrinsically involve characteristics of educational interventions based on situated and social learning perspectives (Anderson et al., 2000).

The concept of learning community emphasizes three persistent characteristics in the perspectives, research and experiences conducted in both primary education and higher education (Jawitz, 2009). First, the reference of a learning community situated in real contexts, and in real workplaces. This can be seen in communities where day to day problems and more complex problems are faced, partially identified and with diffuse border lines (Roth, 1995; 1998). Second, participants collaborate with the achievement of a goal or with overcoming a challenge (Whitcomb et al., 2009). And third, the experience and knowledge function as part of the goods of that community (Lieberman & Pointer-Mace, 2008). Thus, we highlight the importance of context in the understanding of the learning process, through participation in social communities (Lave & Wenger, 1991) and the relationship between knowledge and practice proposed there (Cochran-Smith & Lytle, 2011). The fact that this community participation takes place through authentic learning activities (Brown et al., 1989; Roth, 1995) increases the student disposition towards thinking and problem solving (Putnan & Borko, 2000).

In summary, learning depends on the authentic participation in the community where knowledge is situated and distributed. This model emphasizes the essential role of the human and social ecosystem, where the implication of each student in the development of his/her identity and within his/her own frame of learning is irreplaceable. In this model, knowledge is not completely in the mind of the student, and learning is rather a consequence of participation in the activities of the community. It is inside the community, thus, where the student acquires the knowledge and the skills.

Leisure and Recreation studies participate in this paradigm reflecting real opportunities for applying the acquired knowledge through active learning and participative methodologies (Huber, 2008).

The foundation of the decision-making process

Since the seminal perspectives of Damasio (1994; 1999), the discoveries in the field of neurology and other advancements in the sciences of the mind and brain, the theories about the decision-making process are inclined towards the study of the influence of emotional aspects rather than on rational factors. The discovery of mirror neurons (Kohler et al., 2002; Mitchell, 2005; Rizzolatti & Sinigaglia, 2006), fascinating for any educator as they could be the foundation of the process of mutual understanding and empathy, and the hypothesis about the social brain (Dunbar & Schultz, 2007), show that emotional and affective relationships as well as affiliations and identities, are developed in the context of social spaces. According to Rizzolatti, mirror neurons inform about:

[H]ow strong and deeply rooted is the bond that ties us to others, or in other words, how bizarre it would be to conceive of an I without an us (cited in Rosenfield and Ziff, 2008, p. 65).

Thus, the relationship expert-apprentice, collaborative networking, and all strategies of shared work are the ideal way for developing a professional identity throughout the first academic steps. The current expansion of cyberspace benefits the establishment of cooperative learning environments in working networks connected physically and virtually (Stiegler, 2012).

Daniel Kahneman (2011) defines a perspective of the decision-making process based on two types of thinking: fast thinking and slow thinking. Fast thinking is not based on demonstrable evidence, but rather it is intuitive thinking based on personal experience and, for that reason, it often suffers from bias and prejudices (Teversky & Kahneman, 1981). The authors question the accepted belief that people are generally rational except when extreme emotions distance them from rationality. The author considers that intuitive preferences frequently violate the rules of rational choices. The often appropriate intuitions of the experts are explained by the effect of prolonged practice and experience. This expert intuition is constituted by skills that have been automated through repetition. In these cases, intuition might be just an adequate recognition of the code of the situation, mental operations of perceptions and memory automated through practice and repetition. For this reason, situated learning could contribute with more transference codes than out of context learning or a learning environment of problem solving.

If the intuitive thinking is not expert, it usually points to the presence of the easiest answer then it fails, and the person needs to make a turn to a more deliberate and elaborate thinking that requires concentration. Part of our research consists in analyzing if the students use fast or slow thinking when making the decision about choosing their university studies and justifying their choice in the questionnaires. Given that slow thinking is the one that can compare, relate cause and effect, and make deliberated choices between options, it would be the correct type of thinking to make this decision

MATERIAL AND METHODS

This article explores the expectations that have driven students in their choice of a Leisure and Recreation academic major, considering that if the studies match the expectations of the students, the probability of success in the learning process will increase. Considering that current learning theories emphasize that certain curriculum characteristics stress the success of some forms of learning such as collaborative learning conducted in communities and situated learning experiences that allow a high degree of transference, it would be positive for students to appreciate in a rational or intuitive way the possibilities of these learning experiences. With this conceptual framework in mind, the following research questions have been developed:

- What are the student's curriculum and job expectations for choosing RPTA studies?
- In which degree can situated and collaborative learning be found among those expectations?

The third research question refers to the level of rationality or emotionality that emerges in the expression of the expectations.

- In which degree do the students' expectations reflect a rational analysis or rather a more emotional motivation?

The sample of the study initially consisted of 164 Recreation, Parks and Tourism Administration (RPTA) majors of a National Recreation and Parks Association (NRPA) accredited degree program, at a Midwestern University in the United States of America. A major is the main degree that the student studies at a university. It is the main core of their studies and the student will get a degree in that specific major (such as RPTA, Business Administration, Physical Education, History, Law...). A student can choose a minor besides a major. This minor consists of several courses aiming usually to complement the major with a related field of knowledge. For example, a student can choose a major in Business Administration and a minor in Marketing.

As part of a larger study, data was collected during the 2007 fall semester, over a two week period, in all scheduled undergraduate courses. Students were informed about the study and their participation was voluntary. A total of 164 questionnaires were initially distributed equally in the classrooms. All the questionnaires were returned and the results then analyzed. Students at all levels were included, from freshman to senior. Finally, 120 questionnaires were included in the study because they included all the information required.

Data processing was carried out using AQUAD Seven software, developed by Huber (2012). The choice of this software is justified by its power to combine conjugate the emergent qualitative categories from the statements given by the participants with the conceptual framework and aims that researchers should apply during the interpretative process.

The narrative codes were analyzed and validated through by the research team until final configuration was reached. This configuration was still slightly modified as a consequence of adjustments derived from the intensity of the coding and the possible emerging variants or nuances. This way a more profound understanding of the study phenomenon was achieved. Finally, the articulation of the emergent codes from the narratives achieved a scientific organized structure in the conceptual frame of the theory established in the research (Glaser & Strauss, 1967).

RESULTS AND DISCUSSION

Demographic codes

The final cohort involved in this study was comprised of 120 students, of whom 41.67% were women and 58.33% men. Almost half of the participants (45%) were aged between 20-21 and 33% were aged between 22-23. The rest were older. Most participants of the sample studied recreation studies as an academic major (84.17%), while 15.83% studied recreation as an academic minor. Over 97% of the participants were full-time students. Participants had chosen outdoor recreation (36.67%), public recreation (15%), tourism (13.33%) or other specialties (see Figure 1).

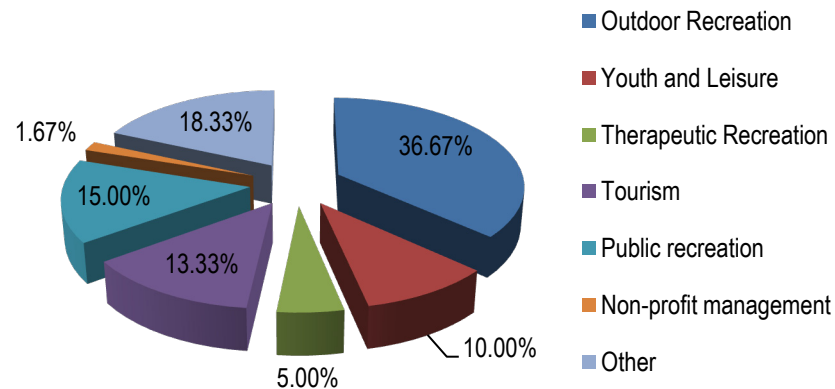


Figure 1. The different specialities.

Inferential codes

Students' expectations. Research questions 1 and 2

In table 1 the codes resulting from the analysis of the data are presented. The results are expressed in percentages of absolute frequencies.

Table 1. Expectations: inferential code map.

Inferential codes	%FA
1. Satisfaction with previous learning and professional experience	8.19%
2. Expectations in finding satisfaction in learning and in a future job	36.06%
3. Expectations of a broad field of learning and also broad job opportunities	12.56%
4. Expectations of situated learning and possibility of working outdoors/nature	20.76%
5. Expectations of collaborative learning and working with people	18.57%
6. Expectations of learning by doing and practical curriculum	3.82%
Total	100%

Satisfaction in previous learning and professional experience

Previous experience, either academic or professional, has been shown to be a source of information and motivation for choosing these studies. Three discriminatory nuances have emerged in this category:

- Satisfaction with previous learning and job experience.
- Dissatisfaction with experiences in other fields.
- Influenced by recommendations or the experience of others.

A considerable number of participants reported to have previous experience in the field of parks and recreation. The narratives include expressions of satisfaction with this previous experience, regardless of being academic or professional experience.

[I] Worked at a Park district for four years, I loved it. (Student 120)

Also, for students that have had a previous positive experience in the field, the fact of pursuing a university degree in this field meant possibilities of getting more qualified jobs within the field:

I wanted to return to school to broaden my understanding of RPTA and earn my masters to become more valuable in the workforce. (Student 116)

However, for some participants the choice was based on previous negative professional or academic experiences in other fields:

I was in school to be a doctor for two years. I realized what I was doing was not making me feel happy. (Student 072)

Within this category some narratives emerge pointing to the importance and influence of the experience of other peers, family, or even advisors' recommendations according to their previous profile.

Following in father's footsteps. (Student 021)

Expectations of finding satisfaction on learning and/or the future work.

This category presents the higher number of expressions, at 36.06%. It includes very emotional expressions of affection, where there is frequently no precision or concretion of the reason or motivation. Considering that this is the most repeated category, we have quantified these three different nuances within the variable.

Table 2. Subcodes expectations of finding satisfaction on learning and/or the future work.

2.1 The interesting and ludic nature of the studies and jobs	16.17%
2.2 Match specific professional expectations	51.47%
2.3 Match their personality	32.35%

A cohort of the participants express, with short and succinct expressive units, that the recreation professional field seems interesting and exciting. Even though they do not express a specific motive of interest, it is shown that they value the ludic nature of the curriculum activities:

Interesting, fun. (Student 077)

I thought it will be interesting. (Student 056)

Most narratives within this category consider that the studies are adequate to their job expectations:

I want to be an events manager so this is the right way to go. (Student 059)

Another group of students point out that they can picture themselves working in this field in the future because they think they will enjoy their work and they value this highly. In some of the sequences of meaning it is seen that they consider that their personality matches the profile of the field, although they do not formulate a rational explanation for this:

[S]omething I could see myself doing. (Student 006)

I want to be able to enjoy my job. (Student 058)

I want to do what I love for the rest of my life. (Student 052)

Expectations of broad learning experiences and broad job opportunities

This category integrates the narratives of the participants where they emphasize the fact that this degree guarantees a future job in different fields due to the broad learning opportunities that it offers. This category emerged as the fourth reason for choosing this major, being present in 12.56% of the narratives. In this regard, the diversity of areas, the interdisciplinary nature, and the possibility of different options and specialization in each of the options, motivates the student. In short, some students report as a reason the vast great variety of possibilities and options the recreation field has to offer as an academic major as well as a professional field:

[A] Also one that would give me a variety of career choices and the possibility to switch careers smoothly later in life. (Student 114)

Broad major with many different types of fields you can explore. (Student 012)

[T]he wide variety of involvement and opportunities. (Student 050)

Likewise, the different options for getting a job were valued by some students:

It has a lot of different areas to go into, not terribly hard to get a job. (Student 079)

Variety of jobs after graduation. (Student 110)

Expectations of situated learning and working outdoors/nature.

The students report that being in touch with nature in their future job is one of the main reasons for choosing this degree. This category is the second most common reason for choosing a Recreation major in this survey, being present in 20.76% of the answers.

Informants use words such as “I have fun”, “I enjoy it”, “I like it”, emphasizing the most emotional side related to personal satisfaction. In their opinion, this field of studies provides with a unique opportunity for people to work in natural settings, to spend time outdoors and to avoid a closed working environment, as reflected in the following narratives:

I like the outdoors more than I like being in an office. (Student 049)

I love the outdoors and want to pass that on to others. (Student 017)

I enjoy being outdoors and getting down with nature. (Student 036)

I have always been interested in the outdoors. So, to me a job in the outdoor Recreation field would be ideal. (Student 044)

Expectations of collaborative learning and working with people

It is also very common that people who decide to study a Recreation major are very people oriented. It is the third reason for choosing this major at 18.57%. It includes two discriminatory nuances:

Because it's great to work with others. (Student 007)

I want to work with people and in a social environment. (Student 066)

Meet new people. (Student 105)

Moreover, students believe that this job is going to allow them to help other people and this causes gives them personal satisfaction:

It is so self rewarding at the same time. (Student 081)

Because you get to work with people when they are happy. (Student 009)

Teaching and helping others. (Student 103)

I want to help people in fitness to get healthier, stronger and feel good. (Student 062)

It is a great field to serve others. (Student081)

Expectations of learning by doing and a practical and applicative curriculum

This reason is reported by 3.82% of the participants. They consider this degree attractive because the curriculum emphasizes the activity of the apprentice: learning by doing (Dewey, 1963). The applicability and the signification on contents are among the dimensions offered in the curriculum. These dimensions are added to a particularity, especially appealing to students: the different possibilities for options and courses that allow the student to elaborate a personal academic career path. According to the students' opinions, these dimensions allow specific scenarios that will contribute, no doubt about it, to apply what is learnt in the degree in a future job. These hands on experiences are, thus, very appealing to students, making the learning process enjoyable and increasing the relationship between theory and practice, and as consequence, favoring authentic learning:

Personally enjoy hands on. (Student 099)

Because I like to work with hands on learning. (Student 004)

Third research question: Rationality and emotionality level in the expression of expectations

As to the third research question, the narratives show that the expectations of the students that motivated their choice reflect a more emotional rather than rational assessment. A high number of the narratives (68.39%) express a large degree of emotionality, and can be identified with the concept of fast thinking of Kahneman (2011). Only 31.60% of the narratives could be identified with slow thinking, which involves more rational choices, with a higher sense of cause and effect or a planning vision.

A majority of the participants have used words such as “love”, “like”, “want” or “enjoy” or others such as “passionate”, “life”, or “happy”, in their expressions emphasizing an emotional and affective dimension (see figure 2).

According to Mirsafian and Mohamadinejad (2012), sport and leisure scenarios are contexts where people lose their inhibitions about emotional reactions.

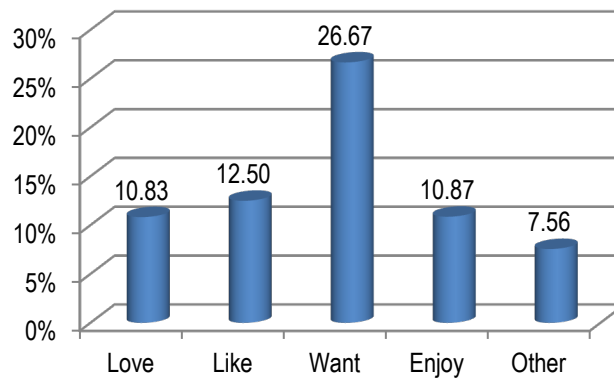


Figure 2. Content-word analysis.

The structure resulting from the analysis of the terms reinforces the emotional character and the importance of the dispositions and attitudes compared to more rational analysis, reasoning and planning. On the other hand, the wording of the narratives makes the most affective and emotional expectations and motivation more pronounced:

I love camping (Student 052)

I want to be able to enjoy my job (Student 058)

According to get my future job with passionately want (Student 001)

It is more freedom to enjoy work, I don't feel forced. (Student 010)

Life enhancement and work and life balance are topics of importance for me. (Student 013)

Arguments of cause and effect, logical analysis of the possibilities of the career, or assessments implying planning, are barely expressed in the narratives, as happens in the following example:

I chose Recreation and Leisure because it is the minor that I need to complete for what I want to do when I Graduate (Student 035).

CONCLUSIONS

The purpose of this research has been achieved. The narratives of the participants show that the choice of a Recreation major is based on factors such as the broad job opportunities that this field offers, even though many of these jobs are part-time jobs. In the case of Illinois, the job offers for positions exceeds the demand, which means that the possibilities of getting a job are optimal. The motivation of the availability of job positions is linked to the consideration that these learning experiences and working tasks match their personality.

The second motivation for their choice (20.76%) is working in a natural setting. Within the narratives that are more specific about their motivations, there emerges the assessment of the learning experiences done in real professional settings, natural environments, parks, where learning is more authentic and there are more chances of transference. In this respect, the combination of the narratives of category 3 about the desire of situated learning in a natural setting (20.76%), the narratives of category 6 about learning by doing (3.82%), and category 5 about learning and working with people (18.57%), would result in a high percentage (43.15%) of narratives that value situated learning experiences that involve a high degree of problem-solving learning in cooperation communities. Thus, preconceptions of students for choosing this degree would be in line with current theories of learning (Darling-Hammond, 1996; Cochran-Smith & Lytle, 1999; 2011)

Finally, previous experiences, although at a lower degree, have an impact on the motivations for the choice. We can conclude that the findings of this study evidence a concordance between the expectations and the characteristics of what would be authentic and effective learning according to the most current perspectives of the educational scientific community (Johnson & Johnson, 2009).

Likewise, in the form and content of the motivations expressed by the informants, we can conclude that in the decision making process the emotional level is highly predominant. We are beings driven by affection, dispositions and attitudes. Rational logical thinking influences less on decisions than what we think. It could be that the decisions which have an integral effect on our personality, need more affective and emotional reasons (Tversky & Kahneman, 1981).

According to the results of this research, a university degree should offer:

- A broad, rich and varied curriculum, that answers to the different demands of the students and allows ample working opportunities (Ladson-Billings, 2004).
- Situated learning in authentic and real settings, where learning environments allow a real application of theoretical knowledge into practice. This learning has to integrate an intensive study where the student can reflect about practice (Cochran-Smith & Lytle, 1999, 2011).
- Collaborative and distributive learning that allows the development of team work and coordination competences, in the classroom as well as in the digital networks, simulating how they will be required to work in the workplace (Darling-Hammond, 1996).
- A learning process that integrates the cognitive and emotional aspects of the mind, based on the neurological findings of this decade and the last theories about the mind and brain (Koch, 2012; Leher, 2012).

These aspects are essential for designing the curriculum and the outline of the courses of a Leisure and Recreation degree. Even though the limitations of a case study do not allow for generalization and direct transference, we do believe that future research could shed new light on necessary knowledge about this topic. Considering the multiple crisis that the modern world faces, the utopia of the emphatic civilization that considers that “we are fundamentally emphatic species”, and that “the Age of reason is being eclipsed by the Age of Empathy” (Rifkin, 2009: p.1 & p.4), results a crucial orientation because:

Only by concerted action that establishes a collective sense of affiliation with the entire biosphere will we have a chance to ensure our future (p. 615).

REFERENCES

1. ANDERSON JR, GREENO JG, REDER LM, SIMON HA. Perspectives on learning, thinking, and activity. *Educational Researcher*. 2000; 229(4):11-13. [[Back to text](#)]
2. BROOKES M. Evaluating the ‘Student Experience’: An Approach to Managing and Enhancing Quality in Higher Education. *Journal of Hospitality, Leisure, Sport and Tourism Education*. 2003; 2(1):17-26. doi:10.3794/johlste.21.27 [[Back to text](#)]
3. BROWN JS, COLLINS A, DUGUID P. Situated cognition and the culture of learning. *Educational Researcher*. 1989; 18(1):32-42. [[Back to text](#)]
4. COCHRAN-SMITH M, LYTLE SL. Relationships of knowledge and practice: Teacher learning in communities. In A. Iran-Nejad and P.D. Pearson, *Review of Research in Education*. 1999; 24:249-306. doi:10.2307/1167272 [[Back to text](#)]
5. COCHRAN-SMITH M, LYTLE SL. Changing Perspectives on Practitioner Research. *Learning Landscapes*. 2011; 4(2):17-23. [[Back to text](#)]
6. DAMASIO A. *Descartes’ error*. New York: G.P. Putnam’s Sons; 1994. [[Back to text](#)]
7. DAMASIO A. *The feeling of what happens: Body, emotion and the making of consciousness*. London: Heinemann; 1999. [[Back to text](#)]
8. DARLING-HAMMOND L. The right to learn and the advancement of teaching: Research, policy and practice for democratic education. *Educational Researcher*. 1996; 6:5-17. [[Back to text](#)]
9. DEWEY J. *Experience and Education*. New York: Collier Books; 1963. [[Back to text](#)]
10. DUNBAR R, SHULTZ S. Evolution in the social brain. *Science*. 2007; 317:1344-1347. doi:10.1126/science.1145463 [[Back to text](#)]
11. ECO U. It’s not what you know... *The Guardian*. 2004; 3 April, 7. [[Back to text](#)]
12. GLASER BG, STRAUSS AL. *The discovery of grounded theory: Strategies for qualitative research*. Nueva York: Aldine. 1967. [[Back to text](#)]
13. HOLLAND JL. Exploring careers with a typology: What we have learned and some new directions. *American Psychologist*. 1996; 51(4):397-406. doi:10.1037/0003-066X.51.4.397 [[Back to text](#)]
14. HUBER GL. AQUAD Six. *Manual for the Analysis of Qualitative data*. Tübingen: Ingeborg Huber Verlag; 2012. [[Back to text](#)]
15. HUBER GL. Aprendizajes activos y metodologías educativas. *Revista de Educación, número extraordinario*. 2008; 59-81. [[Full Text](#)] [[Back to text](#)]
16. JAWITZ J. Learning in the academic workplace: the harmonization of collective and the individual habitus. *Studies in Higher Education*. 2009; 34(6):601-614. doi:10.1080/03075070802556149 [[Back to text](#)]

17. JOHNSON DW, JOHNSON RT. An educational psychology success story: interdependence theory and cooperative learning. *Educational Researcher*. 2009; 38(5):365-379. doi:10.3102/0013189X09339057 [[Back to text](#)]
18. KAHNEMAN D. *Thinking, fast and slow*. New York: Farrar, Straus and Giroux. Books; 2011. [[Back to text](#)]
19. KING M, MORISON I, REED G, STACHOW G. Student feedback systems in the business school: A departmental model. *Quality Assurance in Education*. 1999; 7(2):90-100. doi:10.1108/09684889910269588 [[Back to text](#)]
20. KOCH C. How physics and neuroscience dictate your "free" will. *Scientific American*, April 12; 2012. [[Back to text](#)]
21. KOHLER E, KEYSERS C, UMILTÀ MA, FOGASSI L, GALLESE V, RIZZOLATTI G. Hearing sounds, understanding actions: action representation in mirror neurons. *Science*. 2002; 297:846-848. doi:10.1126/science.1070311 [[Back to text](#)]
22. KRUMBOLTZ JD, WORTHINGTON RL. The school to work transition from a learning theory perspective. *The Career Development Quarterly*. 1999; 47:312-325. doi:10.1002/j.2161-0045.1999.tb00740.x [[Back to text](#)]
23. KRUMBOLTZ JD, MITCHELL AM, JONES GB. A social learning theory of career selection. *The Counseling Psychologist*. 1976; 6(1):71-81. doi:10.1177/001100007600600117 [[Back to text](#)]
24. LADSON-BILLINGS G. New directions in multicultural education: Complexities, boundaries, and critical race theory. In: J. A. Banks and C. A. M. Banks (Eds.). *Hand-book of research on multicultural education* (2nd ed.). San Francisco, CA: Jossey-Bass; 2004. Pp. 50-65. [[Back to text](#)]
25. LAVE J, WENGER E. *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press; 1991. doi:10.1017/CBO9780511815355 [[Back to text](#)]
26. LEHER J. Why we don't believe in science. *The New Yorker*, June 7; 2012. [[Back to text](#)]
27. LIEBERMAN A, POINTER-MACE DH. Teacher learning: the key to educational reform. *Journal of Teacher Education*. 2008; 59(3):226-234. doi:10.1177/0022487108317020 [[Back to text](#)]
28. MARTÍNEZ MA, SAULEDA N. Interdependencia entre las concepciones sobre el aprendizaje y la mente en el escenario de las perspectivas colaborativas de la educación. In: E. Tonda and A. Mula (Eds.). *Scripta in Memoriam*. Alicante: Publicaciones de la Universidad de Alicante; 2001. Pp. 235-254. [[Back to text](#)]
29. MARTÍNEZ MA, SAULEDA N, HUBER G. Metaphors as blueprints of thinking about teaching and learning. *Teaching and Teacher Education*. 2001; 17:965-977. doi:10.1016/S0742-051X(01)00043-9 [[Back to text](#)]
30. MITCHELL WJT. *What pictures want?* Chicago: The University of Chicago Press; 2005. [[Back to text](#)]
31. MILLIS B, COTTELL PG. *Cooperative learning for higher education faculty*. New York: ACE Oryx; 1998. [[Back to text](#)]
32. MIRSAFIAN H, MOHAMADINEJAD A. Sport volunteerism: a study on volunteering motivations in university students. *Journal of Human Sport and Exercise*. 2012; 7(1)Proc:73-84. doi:10.4100/jhse.2012.7.Proc1.09 [[Back to text](#)]
33. PLUMTON C. An exploration of factors involved in choosing recreation as an academic major. Thesis Master of Arts. University of Manitoba. Dissertation Abstracts International, 44(03), (AAT MR08939); 2005. [[Back to text](#)]
34. PUTNAN RT, BORKO H. What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*. 2000; 29:4-15. [[Back to text](#)]

35. RAYMORE LA, BERNO T. Undergraduate parks, recreation, and leisure education: Variables associated with recruitment and implications for retention. *Schole: A journal of leisure studies and recreation education*. 1996; 10:35-43. [[Back to text](#)]
36. RIFKIN J. *The empathic civilization*. New York: Jeremy P. Tarcher/Penguin; 2009. [[Back to text](#)]
37. RIZZOLATTI G, SINIGAGLIA C. *Mirrors in the brain: How our minds share actions and emotions*. Oxford: Oxford University Press; 2006. [[Back to text](#)]
38. ROSENFELD I, ZIFF E. How the mind works: Revelations. *The New York Review of Books*. LV. 2008; 11:62-65. [[Back to text](#)]
39. ROTH WM. *Authentic school science. Knowing and learning in open-inquiry science laboratories*. Dordrecht: Kluwer Academic Publishers; 1995. [[Back to text](#)]
40. ROTH WM. *Designing Communities*. Dordrecht: Kluwer A. P; 1998. [[Back to text](#)]
41. STIEGLER B. La formation de la nouvelle raison: Sept propositions pour l'école. In: D. Kambonahner, P. Meirien and B. Stiegler (Eds.). *L'école, le numérique et la société qui vient*. Paris: Mille et une nuits; 2012. [[Back to text](#)]
42. SUPER DE. A life-span, life-space approach to career development. In: D. Brown, L. Brooks, and Associates (Eds.). *Career choice and development* (2nd Ed.). San Francisco: Jossey-Bass; 1990. Pp. 89-97. [[Back to text](#)]
43. TVERSKY A, KAHNEMAN D. The framing of decisions and the psychology of choice. *Science*. 1991; 211:453-458. doi:[10.1126/science.7455683](https://doi.org/10.1126/science.7455683) [[Back to text](#)]
44. WALKER M. *Higher education pedagogies*. Glasgow: McGraw Hill Education; 2006. [[Back to text](#)]
45. WHITCOMB J, BORKO H, LISTON D. Growing talent. Promising professional development models and practices. *Journal of Teacher Education*. 2009; 60(3):207-212. doi:[10.1177/0022487109337280](https://doi.org/10.1177/0022487109337280) [[Back to text](#)]