



BI4SME

boosting business
intelligence skills for SME
growth

National report - Spain

Survey amongst SME
managers/owners/entrepreneurs and
VET professionals



Co-funded by
the European Union

GRANT AGREEMENT 2021-1-ES01-KA220-VET-000033132

Index

1. INTRODUCTION	4
2. SME MANAGERS / OWNERS / ENTREPRENEURS	5
2.1. PERSONAL INFORMATION	5
2.2 DATA ANALYTICS FAMILIARITY	5
2.3 BUSINESS INTELLIGENCE FAMILIARITY	6
2.4 DATA ANALYTICS AND BUSINESS INTELLIGENCE TOOLS FAMILIARITY.....	6
2.5 MATH FOR BUSINESS INTELLIGENCE SKILLS	6
2.6 COMPUTER PROGRAMMING SKILLS.....	6
2.7 DATA PROCESSING SKILLS	6
2.8 VISUALIZATION SKILLS.....	6
2.9 IMPORTANCE OF SKILLS AND KNOWLEDGE OF DATA ANALYTICS AND BUSINESS INTELLIGENCE IN LINE OF WORK	7
2.10 PREFERENCE IN TRAINING COURSES/SEMINARS	7
2.11 PREFERENCE IN SELF-DIRECTED OR TAUGHT COURSES/SEMINARS	7
2.12 PREFERENCE IN MODULAR OPTIONS OR FIXED OPTIONS	7
2.13 OPTIMAL DURATION OF TRAINING COURSE/SEMINAR (FACE TO FACE).....	7
2.14 OPTIMAL DURATION OF TRAINING COURSE/SEMINAR (ONLINE).....	8
2.15 OPTIMAL TYPE OF TRAINING COURSE/SEMINAR SUPPORTIVE RESOURCES.....	8
2.16 TYPE OF SUPPORT TO BE RECEIVED IN TRAINING COURSES/SEMINAR	8
2.17 PREFERENCE IN TRAINING COURSE/SEMINAR ASSESSMENT	8
3. VET PROFESSIONALS	10
3.1 PERSONAL INFORMATION	10
3.2 DATA ANALYTICS AND BUSINESS INTELLIGENCE FAMILIARITY	10
3.3 BUSINESS INTELLIGENCE SKILLS	10
3.4 TOOL FAMILIARITY FOR DATA ANALYTICS AND BUSINESS INTELLIGENCE.....	11
3.5 MATH SKILLS FOR BUSINESS INTELLIGENCE	11
3.6 COMPUTER PROGRAMMING SKILLS.....	11
3.7 DATA PROCESSING SKILLS	11
3.8 VISUALIZATION SKILLS.....	11
3.9 IMPORTANCE OF DATA ANALYTICS AND BUSINESS INTELLIGENCE SKILLS IN THE WORKPLACE....	11
4. CONCLUSIONS.....	13
4.1 SME MANAGERS/OWNERS/ENTREPRENEURS	13
4.2 VET PROFESSIONALS.....	13

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

1. Introduction

The project, Boosting Business Intelligence Skills for SME Growth (BI4SME), calls for the development of an integrated training strategy for the uptake of business intelligence skills by SMEs.

In order to do so, two separate questionnaires were created in order to collect background data on SME owners/manager/entrepreneurs and VET professionals and this way to measure the current knowledge level. The ultimate goal was to have a base level understanding so that the training strategies that would be created within the BISME project, would build on the current knowledge that the SME owners/managers/entrepreneurs and SME professionals have and be complimentary of their skills.

The present report gathers the results of the questionnaires being circulated in Spain by Amaris and all conclusions were based on the collective results of the answers.

2. SME managers / owners / entrepreneurs

In order to investigate the knowledge and skills of SME managers/owner and entrepreneurs, 18 questions were composed to collect data from the specific group of individuals.

The questions were split into three sections:

- 1) Data analytics and business intelligence topic and tool familiarity
- 2) Business intelligence skills (self-evaluation questions)
- 3) Educational content training preferences

All questions were based on a Likert scale – 1-4, with 1 being the lowest and 4 being the highest.

Each country was called to collect data from a minimum of 10 individuals in order for the data sets to be considered viable.

2.1. Personal Information

Out of the twelve (12) individuals that answered the questionnaire, eight (8) were entrepreneurs, three (3) were SME owners and only one (1) was a SME manager.

2.2 Data Analytics Familiarity

One (1) individual was not at all (1) familiar with data analytics, three (3) individuals were somewhat familiar (2), four (4) were familiar (3) and four (4) were very familiar (4).

2.3 Business Intelligence Familiarity

One (1) individual was not familiar (1) with the idea of business intelligence, four (4) were somewhat familiar (2), five (5) were familiar (3) and only two (2) were very familiar (4).

2.4 Data Analytics and Business Intelligence Tools Familiarity

Three (3) individuals were not familiar (1) with data analytics and business intelligence tools, six (6) were somewhat familiar (2) and three (3) were familiar (3). No one (0) was very familiar (4).

2.5 Math for Business Intelligence skills

Five (5) individuals had no skills (1) in math for business intelligence, two (2) were somewhat familiar (2), four (4) were familiar (3) and only one (1) was very familiar (4).

2.6 Computer Programming skills

Four (4) individuals had no skills (1) regarding computer programming, four (4) individuals had some skills (2), two (2) had good skills (3) and two (2) had proficient skills (4).

2.7 Data Processing skills

One (1) individual had no (1) data processing skills, six (6) individuals had some skills (2), two (2) had good skills (3) and three (3) were proficient (4).

2.8 Visualization skills

One (1) individual had no (1) visualisation skills, two (2) had some (2) knowledge, six (6) had good skills (3) and three (3) were proficient (4).

2.9 Importance of skills and knowledge of Data Analytics and Business Intelligence in line of work

Only one (1) individual didn't think that data analytics and business intelligence was important in their line of work (1), four (4) believed it was somewhat important (2), three (3) thought that it was important (3) and four (4) that it was very important (4).

2.10 Preference in Training Courses/Seminars

Three (3) individuals preferred blended learning, one (1) preferred face to face and blended learning, six (6) preferred online seminars and two (2) preferred online courses and blended learning.

2.11 Preference in Self-directed or Taught Courses/Seminars

Six (6) individuals preferred self-directed courses and the other six (6) preferred taught courses – it was an even split.

2.12 Preference in modular options or fixed options

Two (2) individuals preferred fixed modules compared to the ten (10) that preferred modular.

2.13 Optimal duration of training course/seminar (face to face)

One (1) individual preferred 4-6 hours of training (1 day), seven (7) preferred 7-12 hours (2 days), two (2) preferred 13-24 hours (up to 4 days) and two (2) preferred more than four days.

2.14 Optimal duration of training course/seminar (online)

Two (2) individuals preferred up to 1 hour per session, eleven (11) preferred up to 2 hours per session and only one (1) preferred up to 4 hours.

2.15 Optimal type of training course/seminar supportive resources

One (1) individual preferred a list of resources for further reading and videos, one (1) preferred a list of resources for further reading videos and PowerPoint presentations, one (1) preferred PowerPoint presentations, one (1) preferred printouts / handouts, list of resources for further reading, videos and other interactive resources, one (1) preferred printouts / handouts, list of resources for further reading, videos and other interactive resources, PowerPoint presentations, two (2) preferred printouts / handouts, videos and other interactive resources, four (4) preferred videos and other interactive resources and one (1) preferred videos and other interactive resources, PowerPoint presentations.

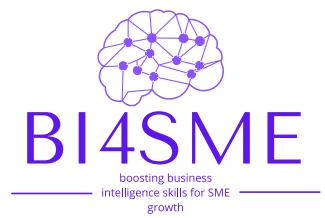
2.16 Type of support to be received in training courses/seminar

Six (6) individuals preferred group support sessions, two (2) preferred one to one support, two (2) preferred one to one and group support, one (1) preferred one to one, group support and peer support and only one (1) preferred peer support.

2.17 Preference in training course/seminar assessment

Four (4) individuals preferred assignments, two (2) preferred group assignments, one (1) preferred no assessment, one (1) preferred peer to peer

National Report - Spain



assessment, three (3) preferred quizzes and one (1) preferred self-assessment.

3. VET Professionals

In order to investigate the knowledge and skills of VET professionals, 10 questions were composed to collect data from the specific group of individuals.

The questions were split into two sections:

- 1) Data analytics and business intelligence topic and tool familiarity
- 2) Business intelligence skills (self-evaluation questions)

All questions were based on a Likert scale – 1-4, with 1 being the lowest and 4 being the highest.

A minimum of 10 individuals had to be surveyed at each country for the data sets to be considered viable.

3.1 Personal Information

Out of the ten (10) individuals that provided information for the questionnaires, one (1) was a business coach, one (1) was a business consultant, one (1) was an entrepreneur expert, one (1) was a teacher at university level, two (2) were VET stakeholders and four (4) were VET teachers/instructors/trainers.

3.2 Data Analytics and Business Intelligence familiarity

Three (3) individuals had some familiarity (2) with the topics of data analytics, three (3) individuals were familiar (3) and four (4) were very familiar (4). No one (0) was not familiar (1) with the topic.

3.3 Business Intelligence Skills

Four (4) individuals were somewhat familiar (2) with business intelligence, four (4) were familiar (3) and only two (2) were very familiar (4). No one (0) was not familiar (1) with it.

3.4 Tool familiarity for data analytics and business intelligence

One (1) individual was not familiar (1) with data analytics and business intelligence tools, three (3) were somewhat familiar (2), four (4) were familiar (3) and two (2) were very familiar (4).

3.5 Math skills for Business Intelligence

One (1) individual had no skills (1) for math for business intelligence, three (3) had some skills (2) and six (6) had good skills (3). No one (0) was proficient (4).

3.6 Computer Programming skills

One (1) individual had no skills (1) in computer programming, four (4) individuals had some skills (2), four (4) had adequate (3) skills and only one (1) was proficient (4).

3.7 Data Processing Skills

One (1) individual had no skills (1) in data processing, four (4) had some skills (2) and five (5) had good skills. No one (0) was proficient (4).

3.8 Visualization skills

One (1) individual had no (1) visualisation skills, four (4) individuals had some skills (2), five (5) individuals had good skills (3). No one (0) was proficient (4).

3.9 Importance of Data Analytics and Business Intelligence skills in the workplace.

Two (2) individuals claimed that data analytics and business intelligence were somewhat important (2) in their workplace, six (6) individuals claimed to be important (3) and only two (2) claimed that it was very important (4). No one (0) claimed that it is not at all important (1).



4. Conclusions

4.1 SME Managers/Owners/Entrepreneurs

The majority of responses came from entrepreneurs and a few from SME owners. Overall, there was a good spread and variety in answers from the participants. Specifically, there was a good familiarity with data analytics as well as business intelligence tools with the computer programming skills as well as visualisation skills having a strong familiarity. Math for business intelligence had slightly low familiarity, but there was a variety of answers for it.

There was an overwhelming preference for online courses over any other form teaching followed by blended learning. There was no preference regarding whether the courses should be self-directed or taught courses – the answers were equally spread out, although there was a strong preference for modular learning. The trainings were also requested to be up to 2 days with 2 hours per session.

4.2 VET Professionals

There was a good blend of answers provided from individuals of different backgrounds. The majority of answers were provided by VET teachers/instructors, trainers, VET stakeholders, business coaches, business consultants, entrepreneurship experts and university teachers. There was a good familiarisation on the topic of data analytics and business intelligence being reported which also translated to a good amount of familiarisation to the tools of data analytics and business intelligence. Math for business intelligence received a good amount of 'good skills' although it was reported that some individuals were not as confident. Computer programming skills received a blend of familiarity, with almost a 50-50 rate in answers. Data processing as well as visualisation also received a good spread of answers with the average agreeing that there was some knowledge but there is room to improve. Lastly, as expected, almost everyone reported that data analytics

National Report - Spain



and business intelligence skills and knowledge are important in their line of work.