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Department of Mathematics
and Computer Science

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über die Auswirkungen moderner IuK-Technik
auf das Lernen an Fernuniversitäten

Bernd J. Krämer 2007

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DATENANALYSE-BERICHT

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AUSWIRKUNGEN MODERNER IUK-TECHNIK AUF DAS LERNEN AN FERNUNIVERSITÄTEN

PROJEKT

AUSWIRKUNGEN
(DIE AUSWIRKUNGEN MODERNER TECHNOLOGIEN AUF STUDIERENDE AN FERNUNIVERSITÄTEN)

ERGEBNIS

WORKPACKAGE 3

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ZUSAMMENFASSUNG

Dieser Bericht fasst die Ergebnisse der in Arbeitspaket 3 (Workpackage 3, WP3) durchgeführten Studie über die Auswirkungen des Einsatzes moderner Informationstechnologien (IuK-Technologien) und neuer Medien auf Fernstudiensysteme der Hochschul- und Berufsausbildung zusammen. Im Gegensatz zu Grund- und Sekundarschulbildung liegen für den Bereich der Hochschulbildung kaum stichhaltige Ergebnisse in Bezug auf die Auswirkungen des Einsatzes moderner IuK-Technologien vor. Diese empirische Studie zielt auf Folgendes ab:

- Die Identifikation neuer Fakten über Erfahrungen und Wahrnehmungen europäischer Studierender in Bezug auf den Einsatz von Technologien im Fernstudium einschließlich persönlicher Vorteile oder Misserfolge, gesteigerten oder vertieften Wissens, durch den Einsatz von IuK-Technologien im Studium hervorgerufener Verhaltensänderungen oder neuer Möglichkeiten, den persönlichen Lernprozess zu organisieren.

- Die Bestimmung von Einstellungen zum Einsatz von Technologien im Fernstudiensystem.

- Die Ermittlung der Meinungen von Studierenden bezüglich der Qualität und Anerkennung von Universitätsabschlüssen, die von Fernuniversitäten verliehen werden.

Basierend auf einer Fragenauswahl, die von den Partnern bereitgestellt wurde, erstellte ein Unterkomitee einen in drei Abschnitte unterteilten Fragebogen: 1) persönliche Daten, 2) Erfahrungen mit technologiegestützten Lernen und 3) Fragen bezüglich Erfahrungen mit einem technologiegestütztem Fernstudium. Das Grundprinzip hinter dieser Struktur bestand darin, die Fragen in Abschnitt 1 und 2 in anderen Zusammenhängen mit technologiegestütztem Lernen und Lehren wieder zu verwenden und nur die Fragen in Abschnitt 3 an den spezifischen Untersuchungsgegenstand anzupassen.

Es wurde eine Interventionsgruppe von 150 Studierenden an der FernUniversität Hagen gebildet, und von den übrigen fünf Partnern des Konsortiums wurden fünf Kontrollgruppen von je 30 Studierenden bestimmt. Die Mitglieder der Interventionsgruppe sollten über Erfahrungen mit dem Fernstudium verfügen, während den Mitgliedern der Kontrollgruppen diese Erfahrung fehlen sollte. Die Erfahrung mit technologiegestütztem Lernen sollte innerhalb aller Gruppen variieren. Letztendlich lagen uns 183 ausgefüllte Fragebögen von Personen aus der Interventionsgruppe und 150 von den Mitgliedern der Kontrollgruppen vor. Die zusammengetragenen Antworten wurden schließlich mithilfe verschiedener statistischer Verfahren analysiert.

Im Folgenden wird eine kurze Übersicht über die Ergebnisse der Untersuchung präsentiert. Details und Belege finden Sie in den entsprechenden Abschnitten des Dokuments.

1. Auswirkungen der IuK-Technologien auf das Lernen im Allgemeinen

In der Gesamtpopulation spielen IuK-Technologien bereits eine wichtige Rolle im Alltagsleben, und die meisten Teilnehmer stehen ihren Auswirkungen positiv gegenüber. Unter den fünf beobachteten Berufsgruppen nutzen Lehrende und Ausbilder die moderne technische Ausstattung am häufigsten. Mehr als 70 % der Befragten bestätigten, dass sich ihre Arbeitsweise auf Grund von technischen Entwicklungen geändert hat. Mehr als 80 % der Teilnehmer befanden die Auswirkungen der IuK-Technologien auf das Lernen nach persönlichen Studienerfahrungen als nützlich. Außerdem glaubte eine erhebliche Anzahl der Teilnehmer (mehr als 50 %), dass die Probleme des Bildungszugangs für behinderte Studierende dank moderner Technologien gelöst wurden; dem widersprach nur eine kleine Gruppe (ca. 10 %). Es ist jedoch wichtig, zu erwähnen, dass

Studierende bezüglich dieses Punktes eine negativere Einstellung zeigen (ca. 30 % widersprechen).

2. *Auswirkungen von IuK-Technologien auf das Lernen an Fernuniversitäten*

   Die meisten Teilnehmer bestätigen, dass IuK-Technologien den Zugang zu Studienmaterialien für Teilzeitstudierende erleichtern (90 %). 75% finden, dass IuK-Anwendungen, die das Lernen und Lehren sowie den Internetzugang zu administrativen Prozessen fördern, das Fernstudium verbessert haben. Neben den Beiträgen der Informations- und Kommunikationstechnik werden multimediale Umgebungen an Fernuniversitäten weitgehend akzeptiert. 80 % der Population stimmen zu, dass das Lernen verstärkt wird, wenn Lehrtexte und Bilder in eine multimediale Umgebung integriert sind. Im Gegensatz dazu stimmen nur 50 % der Teilnehmer – dies entspricht jedoch nach wie vor der Mehrheit – der These zu, dass IuK-Technologien genutzt wurden, um individualisierte Lehrangebote bereit zu stellen.

3. *Effektivität des Einsatzes moderner Technologien im Fernstudium in Hinsicht auf gesteigerte Motivation und aktive Beteiligung, persönliche Interaktion und verbessertes Lernen*

   Eine Mehrheit der Teilnehmer bestätigte, dass IuK-Technologien genutzt wurden, um zur aktiven Beteiligung am Lernprozess anzuregen und kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen. Vor allem Lernspiele wurden generell als effektiver Weg akzeptiert, Fähigkeiten wie beispielsweise Gruppenarbeit zu entwickeln. Lehrende und Studierende unterstützen diese Meinung besonders. Hierbei war interessanterweise zu beobachten, dass Lehrende und Studierende gegensätzliche Standpunkte bezüglich des Beitrags der IuK-Technologien zur intensivierten persönlichen Interaktion einnehmen. Die meisten Lehrenden sind der Meinung, dass Online-Kommunikation einen höheren Grad an Kommunikation zwischen Lehrenden und Studierenden ermöglicht, während relativ wenige Studierende diese Ansicht vertreten.

4. *Anerkennung von Fernuniversitäten*

   Die Zustimmung der Befragten zur Aussage, dass ein Studium an einer Fernuniversität besonders für Erwachsene mit beruflichen oder familiären Verpflichtungen Vorteile aufweist, ist in beiden Gruppen überwältigend. Allerdings herrscht insbesondere in der Kontrollgruppe (bei mehr als 42%) große Unsicherheit über die Vergleichbarkeit der Abschlüsse, die an Fern- und an Präsenzuniversitäten erworben wurden. In der Interventionsgruppe, die gerade Personen mit Fernstudienerfahrung umfasst, herrscht dagegen weitaus weniger Unsicherheit in dieser Frage vor, und die Zustimmung ist fast doppelt so hoch. Ähnliche Unterschiede existieren für beide Gruppen hinsichtlich der Vergleichbarkeit der Studienergebnisse für beide Systeme, wobei hier in beiden Gruppen die Unsicherheit bei der Einschätzung überwiegt.

1 ZIELSETZUNGEN UND UNTERSUCHUNGSZUSAMMENHÄNGE

Dieses Forschungsprojekt zielt darauf ab, den gegenwärtigen Mangel an Untersuchungsdaten in Bezug auf die Auswirkungen von Technologien auf die Erwachsenenbildung zu kompensieren, besonders in Zusammenhang mit dem Fernstudium und lebenslangem Lernen. Dieser Bericht ist der erste in einer Reihe von Berichten, von denen jeder einen anderen Aspekt des Einsatzes moderner Technologien beim Lernen und Lehren an Hochschulen und Berufsausbildungseinrichtungen behandelt. Er konzentriert sich besonders auf den wachsenden Bereich des Fernstudiums. Desmond Keegan (1990) zufolge umfassen charakteristische Merkmale des Fernstudiums:

- die Trennung von Lehrendem und Lernendem/Lernenden
- den Einsatz technischer, medienunterstützender Kommunikation und Zusammenarbeit zwischen Studierenden und Lehrenden
- den Einfluss einer Bildungsorganisation

In dieser Studie untersuchen wir empirisch, ob und inwieweit bekannte Probleme des Fernstudienmodells abgeschwächt oder sogar beseitigt wurden. Ferner versuchen wir auch zu ermitteln, ob die Stärken der Fernuniversitäten, die den gut durchdachten Lerninhalt und die starke Anleitungs-, Organisations- und Verwaltungsunterstützung einschließen, durch den Einsatz moderner Technologien ausgebaut werden konnten.

1.1 Festlegung des Vorgehens

Im Fernstudium ist der Einsatz von Technologien unerlässlich. Er ist keine Ergänzung zu den traditionellen Formen des Fernstudiums: Korrespondenzstudium und telekommunikationsbasierte Bildung. Die Geschichte des Fernstudiums reicht zurück bis ins 18. Jahrhundert, als es zuerst die Form eines Korrespondenzstudiums annahm. Es wurde später durch das telekommunikationsbasierte Fernstudium, das auf einer synchronen Form von Bereitstellung und Interaktion beruht, ergänzt. Aber erst nach dem frühen Erfolg der British Open University eröffnete eine Welle von Fernuniversitätsgründungen in Europa und den Vereinigten Staaten in den 1960ern und 1970ern realistische Alternativen zu der traditionellen klassenraumbasierten Hochschulbildung und bot einer großen Anzahl von Erwachsenen, die durch zeitliche Beschränkung, Entfernung oder körperliche Behinderung benachteiligt waren, eine zweite Chance der Hochschulbildung.

In Europa und andernorts haben die Entwicklungen in der Informations- und Kommunikationstechnik (IuK) im vergangenen Jahrzehnt das Fernstudium wesentlich verändert – von Korrespondenzkursen hin zu technologiebasierten Kursen unter Verwendung des Internets. Der Einsatz verschiedener Arten elektronischer Medien, z. B. zum Einreichen von Aufgaben und deren Korrektur, zum Durchführen von internetbasierten Seminaren, Laborexperimenten und gemeinschaftlichen Klassenaktivitäten, hat Zeit- und Kosteneffizienz gesteigert und den Informationsaustausch verbessert. Interaktive computerbasierte Lernprogramme, Lehranimationen, Video- oder Audiodarbietungen werden als Maßnahmen zur Verbesserung der Qualität des Studienmaterials betrachtet. Neue methodische Ansätze im Hinblick auf technologiebasierte Lehrsituationen wurden entwickelt, die ein größeres Angebot von Lehrfunktionen, eine höhere Lernqualität, stärkere Interaktion und erweitertes Feedback für Fernstudierende versprechen.

Aber auch die Kultur an traditionellen Präsenzuniversitäten hat sich stark verändert. Der Zeit der individuellen E-Learning-Pioniere folgt nach und nach die organisatorische Integration von technologischen Innovationen und E-Learning-Prozessen an europäischen Universitäten. In Deutschland und anderen europäischen Ländern werden diese Übergangsprozesse, die auf eine zukunftsfähige Einbettung des E-Learnings an Universitäten für administrative Prozesse und Serviceleistungen, Lehrkraft- und Dozentenqualifikation, in-

haltliche Weiterentwicklung, Lehrplanstrukturen und Qualitätssicherung abzielen, unterstützt durch national geförderte Fallstudien und Leuchtturmprojekte.

1.2 Zielsetzungen des Projektes

Das Fernstudiensystem ist ein großer und komplexer Bereich, der heute fünf Schwerpunkte der Bildungs- und Ausbildungseinrichtungen umfasst, auf welche hier zunächst näher eingegangen wird:

- **Fernstudium** – bietet Studium oder Ausbildung auf Entfernung an Fernuniversitäten und Fernbildungseinrichtungen und einer wachsenden Anzahl von Fernbildungs-Abteilungen in konventionellen Einrichtungen
- **E-Learning** – E-Learning deckt eine Vielzahl an Programmen und Prozessen ab, wie z. B. web-basiertes Lernen, computerbasiertes Lernen, virtuelle Unterrichtsräume, virtuelle Lernumgebungen wie ILIAS, Moodle oder WebCT und digitale Zusammenarbeit. Es schließt die Datenübermittlung per Internet, Intranet oder Extranet, Podcast und Videocast, Satellitenrundfunk, interaktivem Fernsehen und CD-ROM oder DVD ein. Aber E-Learning bietet auch Lehrinteraktivität, was Lernen von einfachem E-Publishing unterscheidet (Allen, 2003).
- **Synchrone E-Learning-Systeme** – bieten Studium und Ausbildung im World Wide Web für Studierende an, die hauptsächlich in Gruppen lernen und Lernplattformen mit ausgefeilten Synchronkommunikationseinrichtungen wie Centra oder Horizon Wimba nutzen.
- **Gemischtes Lernen** – verwendet eine gemischte Lernform, die Anwesenheit bei Vorlesungen, Übungen und Übungsgruppen oder Instructor Led Training (ILT) und Online-Phasen mit Einsatz des WWW und der IuK-Technologien kombiniert.
- **Mobiles Lernen** – bietet Studium und Ausbildung auf PDAs (einschließlich Palmtops und Handhelds), Smartphones und Mobiltelefonen.

Entlang dieser Hauptlinien der Studien- und Ausbildungsangebote verfolgt das Projekt eine Reihe von Workpackages, deren übergeordnetes Ziel es ist, eine Zusammenstellung von Ergebnissen zu präsentieren. Diese Zusammenstellung soll Lehrenden helfen, die Auswirkungen verschiedener Technologien für ihre Studierenden zu verstehen und forschungsbasierte Prinzipien darzulegen, wie Lehrende, die Technologien in ihrer Lehrtätigkeit am besten nutzen können. Da mobiles Lernen im Rahmen eines früheren Projekts unter der Leitung eines ähnlichen Konsortiums bereits umfangreich untersucht wurde, werden die ersten vier Gesichtspunkte des Fernstudiums im Fokus dieser Arbeit stehen.

Dieser Bericht bezieht sich auf Fernstudierende, die dem Einsatz von Technologien in unterschiedlichem Ausmaß ausgesetzt waren – angefangen bei einem reinen Korrespondenzstudium am einen Ende des Spektrums bis hin zu einem breiten Angebot von Technologieanwendungen am anderen Ende, die Lern- und Unterrichtsverwaltungssysteme (WCET, 2007, Baumgartner et al., 2002), Lernaktivitäts-Verwaltungssysteme (LAMS International, 2007), computergestützte Lerntools zur Zusammenarbeit (Kumar, 1996), interaktive und multimediale Lernmaterialien, computerbasierte Simulationen und Laboratorien (Goodman, 2007), Microworlds, intelligente Unterrichtsprogramme oder automatische Selbsteinschätzungstools umfassen.

Dieser Bericht enthält die Ergebnisse der ersten Datenerhebung und Analyse des Workpackage-Projekts WP3, das von Januar bis Juni 2007 durchgeführt wurde.

1.3 Projektkonsortium

Das Projektkonsortium spiegelt eine interessante kulturelle Mischung wider, da es Mitglieder aus West-, Zentral-, Ost- und Südeuropa enthält. Das Konsortium repräsentiert eine interessante Kombination von Zielgruppen – Präsenzstudiengänge für junge Erwachsene, Fernstudiengänge mit einer hohen Anzahl von Berufstätigen im durchschnittlichen Alter von 29 Jahren und Berufsausbildungen mit Schwerpunkt auf Wirtschaft und Technik. Dementsprechend variieren Art und Intensität der Einbindung von Technologien in den Lernprozess sehr stark.

Corvinno Technology Transfer Center, Ungarn, ist das Technologietransfer-Unternehmen des Department of Information Systems an der Corvinus Universität in Budapest. Sein Schwerpunkt liegt sowohl auf dem Lehren als auch auf der Untersuchung von IT-Anwendungen in der Wirtschaft und im öffentlichen Sektor. Corvinno entwickelt fortlaufend Lehrprogramme in der Informationstechnik, die bestmöglich auf das Universitätsprofil abgestimmt sind und es Ökonomen ermöglichen, Informationssysteme in der Realität zu verwalten. Im Rahmen des Impact-Projekts erfasst das Corvinno Technology Transfer Center Daten der ungarischen Studierenden in Bezug auf den IuK-Einsatz im täglichen Lernprozess.

Distance Education International, Irland, hat umfangreiche Beiträge zur Literatur über das Fernstudium und E-Learning geleistet, an einer großen Auswahl europäischer Projekte mitgewirkt und die weltweit einzige Reihe akademischer Buchbände über Fernstudien verfasst.

Ericsson Education Ireland gehört zu Ericsson, dem Anbieter für Telekommunikationsinfrastruktur. Als Teil der Ericsson Global Services ist Ericsson Education einer der führenden Anbieter für Ausbildungslösungen in der Telekommunikationsindustrie und hat etliche EU-Forschungsprojekte geleitet, vor allem im Bereich des mobilen Lernens.

FernUniversität in Hagen, Deutschland, ist die einzige öffentliche Fernuniversität in Deutschland, die auch Studierende anderer deutschsprachiger Länder betreut. Die FernUniversität bietet ihren 48.200 Studierenden eine Bandbreite an Universitätsabschlüssen. Das Projektteam der FernUniversität verfolgte und leitete eine Auswahl von R&D-Projekten über Lerntechnologien sowohl auf europäischer als auch auf nationaler Ebene und bietet Fernlehre auf Universitätsniveau für die Bereiche Informatik, Elektrotechnik und Informationstechnik, Mathematik, Jura, Kultur- und Sozialwissenschaften sowie Wirtschaftswissenschaften an.

Plovdiv University, eine der größten Universitäten Bulgariens in Plovdiv, Bulgariens zweitgrößter Stadt. Es gibt dort acht Fakultäten: Physik, Mathematik und IT, Chemie, Biologie, Wirtschafts- und Sozialwissenschaften, Rechtswissenschaft, Sprach- und Literaturwissenschaften und Pädagogik. Die Universität beteiligt sich an internationalen Programmen wie TEMPUS, COST, NATO, Leonardo, CEEPUS, 5FP und Marie Curie-Fellowships und an Unterprogrammen, die das Socrates-Programm umfassen – Comenius, Erasmus, Minerva und Jean Monet. Die Universität setzt in hohem Maße auf den Einsatz von Technologien im Bildungsbereich und verfügt über eine umfangreiche technische Ausstattung. Ferner verfügt die Universität Plovdiv über beachtliche Fachkenntnisse im Hinblick auf die Auswirkungen von Technologien auf das Lernen und wird Fachwissen und Daten, vor allem in den Bereichen Fernbildung, E-Learning und Gebrauch des WWW auf dem Campus, zur Verfügung stellen.

University Roma Tre, Italien, ist eine führende Universität in der öffentlichen Fernbildung. Das LPS (Laboratorio di Pedagogia sperimentale) ist eine Forschungsstätte, die seit über zehn Jahren mit dem Department of Education Sciences der Universität Roma Tre zusam-

menarbeitet. Das LPS hat es sich zum Ziel gesetzt, durch Gestaltung und Durchführung experimenteller Forschungsinitiativen zu der Entwicklung der Bildungskultur beizutragen. Das Labor publiziert die wissenschaftliche Zeitschrift *Cadmo*, *An International Journal of Educational Research*, kooperiert in nationalen und internationalen Forschungsprojekten und betreibt Hochschulbildungsaktivitäten durch das Forschungsdoktorat mit dem Titel *Innovation and Evaluation of Education Systems*.

1.4 Danksagung

Das Team möchte sich für die Unterstützung und Hilfe bei der Herausgabe und Verteilung des ersten Fragebogens und der Zusammenstellung der Antworten der Studierenden durch die Verwaltungsangestellten der Partnerinstitutionen bedanken. Unser besonderer Dank gilt Dr. Christine von Prümmer und Ute Rossié vom Rector's Evaluation and Quality Assurance Team, die den deutschen Online-Fragebogen erstellt und die 183 an der FernUniversität eingegangenen Antworten bearbeitet haben, sowie Ute Wandel vom Studierendenzentrum der FernUniversität, die für die Auswahl der befragten Studierenden verantwortlich zeichnete. Volker Winkler leistete tatkräftige Unterstützung bei der Erstellung der PDF-Version dieses Berichts.

2 UNTERSUCHUNGSMETHODIK UND -ANSATZ

Die randomisierte kontrollierte Studie wurde als Untersuchungsmethodik für das Projekt ausgewählt, um die Auswirkungen der Einführung neuer Technologien auf erwachsene Lernende zu testen. Angewandt wurde eine weit verbreitete Methode, welche ein Probandenvolumen von 300 Personen erfordert, mit 150 Personen in der Interventionsgruppe und 150 weiteren in der Kontrollgruppe. Ein Diskussionspunkt im Rahmen des Projektes war die Bestimmung der optimal anzuwendenden statistischen Methode. Unsere Experten aus Rom schlugen vor, eine induktive Statistik zu verwenden, weil nur schwache Übereinstimmungen zwischen den Inhalten der Variablen vorlagen. Eines der Ziele des Projekts sollte es demnach sein, eine Reihe von Variablen zu definieren, die von der Wissenschaftsgemeinde in Europa mitgenutzt werden können.

2.1 Untersuchungshypothesen

Unsere Untersuchungshypothese umfasst drei Aspekte:

- „Zwischen Menschen mit oder ohne Erfahrung hinsichtlich eines Studiums an einer Fernuniversität gibt es keinen signifikanten Unterschied in der Beurteilung der Tatsache, dass der Technologieeinsatz im Fernstudium verschiedene Nachteile dieses Studienmodells bewältigen kann, unter anderem verhinderte Interaktion zwischen Lehrenden und Studierendem, indirekte Kommunikation oder verminderte Möglichkeiten der sozialen Interaktion."
- „Es wird allgemein anerkannt, dass der Einsatz von Technologien in der Hochschulbildung vorteilhaft für die Studierenden allgemein und für besondere Belange einzelner Studierenden ist."
- „Es wird allgemein anerkannt, dass das Studium, das von Fernuniversitäten angeboten wird, mit dem der Präsenzuniversitäten vergleichbar ist, und dass die Hochschulabschlüsse der Fernuniversitäten die gleiche Anerkennung finden wie die der traditionellen Präsenzuniversitäten."

2.2 Methodik: Prinzipien und Ansatz

Die angewandte Untersuchungsmethode war in sechs Phasen unterteilt:

1) Erfassung von Fragestellungen, die von den Partnerinstitutionen untersucht werden sollen
2) Bildung eines Experten-Unterkomitees für die sozialwissenschaftliche Datenanalyse, dessen Aufgabe Folgendes war:
    a. Entwicklung eines Konzeptionsmodells zur Steuerung der Datenanalyse und
    b. Entwurf eines Fragebogens, der auf den Fragestellungen aus Phase1) basiert
3) Prüfung, Test und Genehmigung des Fragebogens durch das gesamte Projektteam
4) Ausgabe des Fragebogens an die sechs Zielgruppen; ggf. nach Übersetzung in die jeweilige Sprache
5) Erfassung der bei allen Institutionen eingegangenen Antworten und Durchführung entsprechender Datenanalysen
6) Auswertung der Analyseergebnisse und Präsentation dieser Ergebnisse in einem umfassenden Bericht (vorliegendes Dokument)

Eine Reihe statistischer Analysen wurde auf die erfassten Daten angewandt, inklusive deskriptiver Statistiken, die die Gesamtheit der Befragten abdeckt, t-Tests, die die Interventions- und Kontrollgruppen vergleichen, nicht-parametrische Korrelationen, Kreuztabellierungen und Varianzanalysen.

2.3 Konzeptionsmodell und Untersuchungsgegenstände

Das Konzeptionsmodell, das den Gesichtspunkten zu Grunde liegt, für die diese und Folgeuntersuchungen Antworten liefern sollen, umfasst Folgendes:

Reaktion der Studierenden:
Hat den Studierenden der Einsatz von IuK-Technologien in ihrem Studium gefallen bzw. haben sie davon profitiert?

Studienerfolg:
Konnten die Studierenden ihr Wissen oder ihre intellektuelle Kapazität verbessern?

Verhalten:
Haben die Studierenden technologiegestütztes Lernen eingesetzt und dadurch ihr Verhalten geändert?

Ergebnis:
Sind quantitativ bestimmbare Fälle von organisatorischer Leistungssteigerung aufgetreten?

Technologien:
Können wir beweisen oder widerlegen, dass der verstärkte Einsatz von Technologien im Bildungsbereich positiv wahrgenommen wird?

Einstellungen:
Welche Ansicht vertreten die Befragten im Hinblick auf die Auswirkungen von Technologien auf das Lernen?

Geschlecht:
Verbessert der Technologieeinsatz die Lernprozesse der weiblichen Studierenden? Profitieren weibliche Studierende vom Lernen traditionell „männlicher“ Studienfächer (Maschinenbau) durch geschlechtsneutrale Medien wie Centra?

Studierendenbezogenes und aufgabenbasiertes Lernen:
Schafft der Einsatz von Technologien im Lernprozess Möglichkeiten, die Priorität auf aufgabenbasiertes Lernen zu setzen?

Diese Aspekte des Konzeptionsmodells lenkten die Gestaltung der Fragen und der Struktur der Fragebögen, die in unserer empirischen Studie verwendet wurden.

2.4 Fragebogen-Gestaltung

> *„Statistical designs always involve compromises between the desirable and the possible.“ (Statistische Modelle sind immer mit einem Kompromiss zwischen dem Wünschenswerten und dem Möglichen verbunden) (L. Kish, 1987)*

Der Fragebogen wurde in drei Abschnitte unterteilt:

1) Persönliche Daten einschließlich sozialer Indikatoren wie Geschlecht, Alter, Beruf oder Bildung, da Beurteilungen auf solchen Indikatoren beruhen

2) Erfahrung mit technologiegestütztem Lernen, und
3) Fragen in Bezug auf Erfahrungen mit technologiegestützten Fernstudien

Ziel dieser Struktur war die erneute Verwendung der Fragen in Abschnitt 1 und 2 in der Analyse der anderen drei Aspekte von technologiegestütztem Lernen und Lehren (E-Learning, synchrones E-Learning und gemischtes Lernen). Nur die Fragen in Abschnitt 3 wurden an den spezifischen Untersuchungsaspekt angepasst.

Um Kürze und Klarheit zu gewährleisten, sollten nur geschlossene Fragen verwendet werden. Da in erster Linie Wahrnehmungen, Einstellungen und Meinungen bezüglich der Auswirkungen von Technologien auf das Fernstudium ermitteln werden sollten, wurde entschieden, in Abschnitt 2 und 3 festgelegte Ansichten als Fragebogenaussagen zu verwenden und Antworten einheitlich auf einer fünfstufigen Skala zuzulassen, die sich von einem hohen Zustimmungsgrad bis hin zu völliger Nichtübereinstimmung erstreckt. Die ungerade Anzahl möglicher Antworten hat den Vorteil, dass Befragte, die weder zustimmen noch widersprechen wollen, ihre Unsicherheit über eine bestimmte Frage ausdrücken können.

Um Zustimmung aus Passivität zu vermeiden und erkennen zu können, wurden einige Aussagen negativ formuliert, z. B. Frage 10 (siehe Anhang A.1): *Nur Optimisten glauben, dass die Auswirkungen der IuK-Technologien auf das Lernen von Vorteil sind.*

Alle vier Fragebögen wurden während eines Projekttreffens im März 2007 in Plovdiv von dem gesamten Projektteam durchgesehen, teilweise korrigiert und auf Vollständigkeit, Ausschließlichkeit und Eindeutigkeit hin geprüft. Die Fragebögen wurden anschließend vom gesamten Projektteam genehmigt.

2.5 Eigenschaften der Interventions- und Kontrollgruppen

Da das Fernstudium im Mittelpunkt dieser Untersuchung stand, wurde die FernUniversität in ihrer Rolle als Fernbildungseinrichtung ausgewählt, um die Interventionsgruppe aus ausgewählten Mitgliedern ihrer Studierenden zu bilden, während die anderen Partner in Summe die gleiche Anzahl an Befragten in fünf verschiedenen Kontrollgruppen stellten.

2.5.1 Interventionsgruppe: 150 an einer Fernuniversität eingeschriebene Studierende

Die Teilnehmer der Interventionsgruppe waren 150 Studierende der FernUniversität in Hagen, der einzigen deutschsprachigen Fernuniversität mit ca. 48.200 Studierenden.

Um eine ausreichende Anzahl an Antworten sicherzustellen, wurden 1.500 Studierende aus der Datenbank der FernUniversität ausgewählt (siehe Abb. 1). Auswahlkriterien waren die folgenden:

1) Studierende, die für mindestens drei verschiedenen Fachbereiche eingeschrieben waren, um kulturelle Unterschiede zwischen den Lehrfächern zu erfassen

2) Studierende aus unterschiedlichen Studienphasen

3) Unterschiedliche Ausmaße des Umgangs mit Lerntechnologien und multimedialen Lerninhalten im Fernstudium

4) Ausgeglichene Geschlechterverteilung

5) Sowohl Teilzeit- als auch Vollzeitstudierende

FernUniversität in Hagen
Fr. Wandel, Dez. 2.4.2,
Tel. 2081

Befragung zu den Auswirkungen des Einsatzes Neuer Medien und der IuK-Technik auf das Fernstudium

07.05.2007

Auswahl:
nicht exmatrikuliert
Vollzeit-, Teilzeitstudierende
endgültig eingeschrieben
Studiengang = s.u. weitg. Gleichverteilung

insg. 5.023 Studierenden davon:

Fachsemester	(Alle)
Staatsangehörigkeit	(Alle)
Hochschulsemester	(Alle)
Hörerstatus	(Alle)

Anzahl von mtknr		geschl		
abschl_l	stg_l	M	W	Gesamtergebnis
Bachelor	Bildungswissenschaft	64	292	356
	Rechtswissenschaft	210	190	400
	Wirtschaftsinformatik	349	88	437
Bachelor Summe		623	570	1193
Master	Elekt-u-Infor-Technik	192	17	209
	Rechtswissenschaft	58	40	98
Master Summe		250	57	307
Gesamtergebnis		873	627	1500

Fachsemester	(Alle)
Staatsangehörigkeit	(Alle)
Hochschulsemester	(Alle)
Hörerstatus	Teilzeitstudent

Anzahl von mtknr		geschl		
abschl_l	stg_l	M	W	Gesamtergebnis
Bachelor	Bildungswissenschaft	46	232	278
	Rechtswissenschaft	177	147	324
	Wirtschaftsinformatik	293	73	366
Bachelor Summe		516	452	968
Master	Elekt-u-Infor-Technik	181	10	191
	Rechtswissenschaft	39	30	69
Master Summe		220	40	260
Gesamtergebnis		736	492	1228

Fachsemester	(Alle)
Staatsangehörigkeit	(Alle)
Hochschulsemester	(Alle)
Hörerstatus	Vollzeitstudent

Anzahl von mtknr		geschl		
abschl_l	stg_l	M	W	Gesamtergebnis
Bachelor	Bildungswissenschaft	18	60	78
	Rechtswissenschaft	33	43	76
	Wirtschaftsinformatik	56	15	71
Bachelor Summe		107	118	225
Master	Elekt-u-Infor-Technik	11	7	18
	Rechtswissenschaft	19	10	29
Master Summe		30	17	47
Gesamtergebnis		137	135	272

Abbildung 1: Auswahl der Interventionsgruppe an der FernUniversität

2.5.1.1 Auswahl der Probandengruppe

Ausgewählt wurden Bachelor-Studierende des Studienfachs Bildungswissenschaft, die das erste Kriterium erfüllten, da diese Studierenden mit verschiedenen Arten von Lerntechnologien wie Moodle, CSCL-Tools oder synchronen Kommunikations- und Zusammenarbeitstools arbeiten und sich auch mit modernen Lerntechnologie-Standards und Bildungstheorien befassen. Die zweite Gruppe umfasste 400 Studierende der Rechtswissenschaft, die über weniger Erfahrung mit modernen Lerntools, aber hervorragende Erfahrung mit neuen und interaktiven multimedialen Lernmaterialien verfügen. 437 ausgewählte Studierende waren für das Studienfach Wirtschaftsinformatik eingeschrieben, d. h. für ein fächerübergreifendes Studium, das technische Fähigkeiten mit Wirtschaftskenntnissen kombiniert. Eine vierte Untergruppe umfasste 209 Master-Studierende des Studiengangs Elektro- und Informationstechnik sowie 98 Studierende der Rechtswissenschaft in einem Master-Studiengang.

Die Abdeckung verschiedener Studienphasen vom Bachelor-Studierenden im zweiten Semester bis hin zum Master-Studierenden erfüllt hierbei Kriterium 2 genau.

Studierende der Bildungswissenschaft und der Rechtswissenschaft arbeiten in überdurchschnittlich starkem Maße mit Lerntechnologien, während Studierende der Wirtschaftsinformatik und der Elektro- und Informationstechnik mit Technik im Allgemeinen vertraut sind, ihre Erfahrung mit Lerntechnologien jedoch eher durchschnittlich ist. Master-Studierende arbeiten hauptsächlich mit Korrespondenzmaterial und standardmäßigen Online-Kommunikationseinrichtungen wie E-Mail oder Newsgroups.

Insgesamt war die Geschlechterverteilung in der Zielgruppe mit 873 männlichen und 627 weiblichen Studierenden relativ ausgeglichen. Innerhalb der Untergruppen ist jedoch ein auffallendes Ungleichgewicht mit 1 männlichen auf 5 weibliche Studierende der Bildungswissenschaft und 12 zu 3 bei den Studierenden der Wirtschaftsinformatik bzw. 10 zu 1 für die Studierenden der Elektro- und Informationstechnik festzustellen. Insgesamt wurden 1.228 Teilzeitstudierende und 272 Vollzeitstudierende ausgewählt.

2.5.1.2 Erstellung des Fragebogens

Auf Grund der großen Anzahl an Studierenden, die vom Studierendensekretariat der FernUniversität per E-Mail kontaktiert wurden, wurde eine Online-Version des Fragebogens entwickelt, um eine automatische Erfassung der Antworten in einer Back-end-Datenbank einzurichten. Dies hatte den zusätzlichen Vorteil, dass die Vollständigkeit jedes Fragebogens kontrolliert werden konnte, da die Studierenden erst mit der nächsten Seite (mithilfe der „Weiter“-Schaltfläche in Abb. 2 und 3) fortfahren konnten, wenn alle Fragen und Aussagen auf der Seite bearbeitet worden waren.

Der Originalfragebogen wurde ins Deutsche übersetzt, um die Verständlichkeit zu verbessern und mögliche Fehlinterpretationen der Fragen von Studierenden, deren Muttersprache nicht Englisch war, zu vermeiden (siehe Anhang A.3.2). Für die E-Mails wurde ein Deckblatt mit den folgenden kurzen Angaben entworfen (siehe ebenfalls Anhang A.3.1):

- Ziel des Fragebogens
- Verantwortliche(r) Betreuer/in (hier: Prof. Krämer von der FernUniversität)
- Durchschnittliche Zeit, die zur Beantwortung aller Fragen benötigt wird (ca. 10 Minuten)
- Abgabefrist
- Kontaktperson und ihre E-Mail-Adresse
- Informationen zur garantierten Anonymität

Abbildung 2: Frage 1, zu Testzwecken halboffene Frage

Um die Angemessenheit und Vollständigkeit der Antworten zu Frage 1 („In welcher Funktion sind Sie beruflich tätig?“) zu überprüfen, wurde diese Frage halboffen gestaltet, indem die Auswahl „Sonstiges“ mit einem freien Eingabefeld hinzufügt wurde. Somit wurde Befragten, die von keiner der vorgegebenen Antwortmöglichkeiten überzeugt waren, ermöglicht, genaue Angaben zu ihrer Beschäftigung zu machen (siehe Abb. 3).

2.5.1.3 Ausschreibung einer Verlosung

Um das Interesse der Studierenden an der Studie zu verstärken, wurde entschieden, fünf Science-Fiction-Bücher von einem weltbekannten Informatiker zu verlosen. Studierende, die an der Verlosung teilnehmen wollten, mussten dies durch die Eingabe einer gültigen E-Mail-Adresse in ein Texteingabefeld bestätigen. Alternativ konnte die Teilnahme an der Verlosung durch Aktivieren des Kontrollkästchens „Ich möchte meine E-Mail-Adresse nicht angeben“ abgelehnt werden (siehe Abb. 3). In der Anmerkung oben auf der Seite wurde ferner versichert, dass diese Informationen ausschließlich für die Teilnahme an der Verlosung und die Benachrichtigung der Gewinner genutzt würden.

Abbildung 3: Webseite, die die Verlosung von fünf Büchern bekannt gibt

2.5.1.4 Organisation des Online-Fragebogens

Die Fragen in Abschnitt 2 und 3 des Fragebogens waren in zwei Tabellen unterteilt, sodass Studierende problemlos alle für das aktuelle Thema des Fragebogens wichtigen Aspekte überblicken konnten (d. h. „Auswirkungen der Informations- und Kommunikationstechnik (IuK) auf das Lernen im Allgemeinen“ beziehungsweise „Auswirkungen der Informations- und Kommunikationstechnik (IuK) auf das Lernen an Fernuniversitäten“, siehe Abb. 4). Die Fragen in Abschnitt 2 bezogen sich auf Aspekte wie Bildungszugang für behinderte Studierende, persönlichen Kontakt und Online-Kommunikation, aktiver beteiligte Studierende oder Verbesserung des Studienerfolges. Die untersuchten Aspekte bezüglich des weiter eingegrenzten Themas des unabhängigen Lernens an einer Fernuniversität umfassten die folgenden: Internetzugang für administrative Prozesse oder erleichterten Zugang zu Studienmaterialien. Hier wurden auch persönliche Beurteilungen von Qualität und Anerkennung von durch Fernuniversitäten vergebene Hochschulabschlüsse untersucht.

2.5.1.5 Erfassung der Antworten

183 ausgefüllte Fragebögen wurden in der Interventionsdatenbank erfasst, während die Website https://eva.fernuni-hagen.de/mrIWeb/mrIWeb.dll?I.Project=dvtprojekt in der Zeit vom 7. bis zum 29. Mai 2007 zugänglich war. Die Daten wurden in eine Excel-Datei extrahiert und dem italienischen Partner zum Zwecke weiterer Datenauswertungen übermittelt.

Da das Interesse an der Verlosung mit 159 positiven Antworten unerwartet hoch war, wurde die Anzahl der Bücher auf 9 und die Gewinnchance auf 5,7 % erhöht. Die Auslosung erfolgte am 30. Mai, und alle Gewinner erhielten ihren Preis bis zum 8. Juni 2007.

Quest17 31.05.2007 16:52 Uhr

FernUniversität in Hagen — Lehrgebiet Datenverarbeitungs-technik

Abteilung Evaluation der Stabsstelle für Evaluation & Qualitätssicherung

75%

FRAGEN zu Auswirkungen der Informations- und Kommunikationstechnik (IuK) auf das LERNEN AN FERNUNIVERSITÄTEN:

Bitte äußern Sie Ihre Meinung in jeder Zeile, indem Sie auf einer Skala von 1 bis 5 das jeweils Zutreffende anklicken.
Dabei bedeutet 1 = stimme voll und ganz zu; 2 = stimme weitgehend zu; 3 = weder-noch; 4 = stimme eher nicht zu; 5 = bin gänzlich anderer Meinung.

	1	2	3	4	5
Der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, hat das Fernstudiensystem verbessert.	◉	○	○	○	○
IuK-Technologien erleichtern den Zugang zu Studienmaterialien für Teilzeitstudierende.	○	○	○	○	○
Universitätsabschlüsse, die von Fernuniversitäten vergeben werden, sind mit den von Präsenzuniversitäten verliehenen vergleichbar.	◉	○	○	○	○
Es gibt keinen Unterschied im Studienerfolg zwischen Absolventinnen und Absolventen von Fernuniversitäten und von Präsenzuniversitäten.	○	○	○	○	◉
Das Studium an einer Fernuniversität hat Vorteile besonders für Erwachsene, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen.	◉	○	○	○	○

Zurück Weiter

Email: Dr. Christine von Prümmer Ute Rossié © FernUniversität in Hagen

Abbildung 4: Fragen bezüglich der Auswirkungen der Technologie auf Fernuniversitäten

2.5.2 Kontrollgruppe 1: 30 Studierende aus Bulgarien ohne Erfahrung mit technologiegestütztem Lernen

Der englische Fragebogen wurde zuerst ins Bulgarische übersetzt (siehe Anhang A2), um den entsprechenden Befragten die Bearbeitung zu erleichtern. Anschließend teilten Lehrende an der Agricultural University Plovdiv während ihrer Lehrveranstaltungen ausgedruckte Kopien der bulgarischen Version des Fragebogens an zufällig ausgewählte Studierende an dieser Universität aus. Nachdem die Studierenden ihre Fragebögen ausgefüllt hatten, wurden diese eingesammelt. Aus den Daten wurde anschließend eine Excel-Tabelle erstellt, die schließlich dem italienischen Partner zwecks Analyse der erfassten Daten übermittelt wurde.

Es wurden Studierende der Agricultural University statt Studierende des eigenen Instituts des Projektpartners ausgewählt, da die Universität Plovdiv Studierenden Studiengänge in

den Bereichen Naturwissenschaften, Wirtschafts- und Sozialwissenschaften, Mathematik und Informatik, Chemie und anderen Bereichen anbietet. Dies erschwert es, per Zufallsauswahl Studierende zu finden, die keine oder wenig Erfahrung mit dem Einsatz von IuK-Technologien in einem Lernkontext haben, was wiederum eine gewünschte Eigenschaft dieser Kontrollgruppe war. Studierende der Agricultural University erfüllen dieses Kriterium im Allgemeinen wesentlich besser.

2.5.3 Kontrollgruppe 2: 30 Mitglieder der Fakultät in Corvinno, Ungarn

Wie im Falle der deutschen und der bulgarischen Version, übersetzten die ungarischen Partner den Fragebogen zuerst in die ungarische Sprache, bevor eine Online-Version dieses Fragebogens verfasst und über folgende Website bereitgestellt wurde:

http://sirius.uni-corvinus.hu/targyertekeles.nsf/login?open&id=GKIK-73HNXH.

Anschließend wurden die Mitglieder der SIG (einer Special Interest Group bestehend aus Studierenden und Absolventen, die sich für die Corvinno-Aktivitäten interessieren) der Fakultät über die Ziele der Studie bzw. die Beweggründe für die Durchführung dieser Studie informiert. 50 anonyme Login-Codes wurden für die Mitglieder der SIG-Gemeinschaft erstellt und per E-Mail versandt.

Nach Bereitstellung der Website wurden die Antworten automatisch erfasst. Nach Eingang des 30. ausgefüllten Fragebogens wurden dem italienischen Partner alle Antworten zur Datenanalyse übermittelt.

2.5.4 Kontrollgruppe 3: 30 Erwachsene Studierende aus Irland ohne Erfahrung mit Fernstudien

Die Fragebögen wurden unter Anleitung von Distance Education International (DEI) von Studierenden des Cork Institute of Technology, Bishopstown in Cork/Irland, ausgefüllt. Die Studierenden waren alle für Erwachsenenbildungskurse am Cork Institute of Technology eingeschrieben. Eine Vielzahl der Studierenden war weiblichen Geschlechts, und viele der Studierenden waren älter als 40 Jahre.

Sie wurden für die Kontrollgruppe ausgewählt, da sie keine Erfahrung mit dem Studium an einer Fernuniversität oder einem Fernbildungssystem hatten.

Die Fragebögen wurden während des Unterrichts im Rahmen eines Abendkurses an die Befragten ausgegeben und in Anwesenheit des Lehrenden ausgefüllt.

Es gingen 30 Antworten ein, die dem italienischen Partner übermittelt wurden.

2.5.5 Kontrollgruppe 4: 30 Auszubildende aus Irland

Annähernd 55 Fragebögen wurden an Auszubildende von Ericsson Education und Studierende einer lokalen Fachhochschule ausgegeben. Das Feedback war positiv, und mit 30 ausgefüllten Fragebögen wurde das angestrebte Ziel erreicht. Die Gruppen wurden ausgewählt, da sie über Erfahrung mit Fernuniversitäten verfügen sollten.

Die Mehrheit der Befragten entstammte Ericsson Education. Innerhalb von Ericsson Education gehörten die Befragten hauptsächlich den Bereichen Management und Beratung an. Die Befragten der Fachhochschule waren Lehrende und Studierende.

Alle Daten wurden in elektronischer Form versandt und beantwortet.

2.5.6 Kontrollgruppe 5: 30 Studierende im Aufbaustudium der Bildungswissenschaft aus Italien

Die Daten wurden unter Studierenden im Aufbaustudium erhoben, die an der Universität Roma Tre eingeschrieben waren. Über 56 Fragebögen wurden erfasst; nur vier der Befragten waren männlich, was dem allgemeinen Profil der Kurse für Bildungswissenschaft entspricht, die von der Universität angeboten werden. Die Gruppen wurden so ausgewählt, dass sie dieses spezifische Verhältnis wiedergaben.

Die Fragebögen wurden vor Unterrichtsbeginn ausgeteilt, und den Befragten wurde beliebig viel Zeit für die Beantwortung der Fragen gewährt. Die Daten wurden dann in elektronische Form gebracht.

2.5.7 Zusammenfassung der Gruppenzusammenstellung

Die Beschreibung der Probandenauswahl der Interventions- und der Kontrollgruppe beweist, dass wir eine gute Mischung verschiedener Nationalitäten, Altersgruppen, beruflicher Hintergründen und Karriere- oder Studienphasen sowie unterschiedlicher Bildungsformen erzielt haben. Dazu zählen das traditionelle persönliche Lehren junger Menschen am Campus, Bildung berufstätiger Erwachsener durch Abendkurse und Fernuniversitäten sowie Berufsausbildungen. Mit Informatik, Ingenieurswissenschaften, Sozialwissenschaften und Rechtswissenschaften ist eine große Bandbreite an Studienfächern abgedeckt. Die Probandenauswahl in beiden Gruppen zeigt unterschiedlich große Erfahrung im Umgang mit Technik, sowohl im Allgemeinen als auch speziell im Bildungsbereich, während nur die Interventionsgruppe über Erfahrung mit Fernuniversitäten verfügt.

3 ÜBERARBEITUNG DES FRAGEBOGENS

In der Interventionsgruppe wählten 67 Befragte die Kategorie „Sonstiges“ bei der Frage nach der Beschäftigung (Frage 1) und gaben eine spezifische Berufsbezeichnung an. Dies bedeutet, dass sie die vorgegebenen Alternativen für nicht zutreffend befanden. Mit einer recht freien Interpretation der aufgelisteten Berufsbezeichnungen durch die Befragten können 45 dieser Angaben der Kategorie „technische Tätigkeit“, 5 der Kategorie „Studierende(r)“ und 9 der Kategorie „ohne Beschäftigung“ zugeordnet werden. Die übrigen 9 jedoch passten nicht ins Schema und erforderten zwei weitere Kategorien, „freiberuflich“ (8) und „im Ruhestand“ (1).

Deshalb entschied das Konsortium, den Fragebogen um diese beiden Kategorien zu erweitern, um diese in den Workpackages 4 bis 6 zu verwenden.

Ein besonderes Problem ergab sich für die Kategorie „Studierende(r)“, da alle Probanden der Interventionsgruppe Studierende der FernUniversität sind. Dies führte dazu, dass Studierende dies als Frage nach „Vollzeitstudierenden“ auffassten, welche aber typischerweise eine Minderheit unter den Studierenden an Fernuniversitäten darstellen. Die 5 Befragten, die „Sonstiges“ wählten, aber in einem weiteren Sinne als Studierende angesehen werden könnten, sind Trainees oder Auszubildende.

Ein weiteres Problem ergab sich im Zusammenhang mit den Antwortkategorien in Frage 4 (Bildungsabschluss), da sich die Definition der Zeiträume als ungünstig erwies. In der nächsten Version des Fragebogens dieses Projekts wird die Kategorie „Ein- bis dreijährige Hochschulausbildung“ ersetzt durch: „Hochschulausbildung von drei Jahren oder weniger“

4 DESKRIPTIVE STATISTIK UND PROBANDENVERGLEICH

Die Gesamtprobandenzahl betrug 359; dies entspricht einer annähernd gleichmäßigen Aufteilung auf beide Gruppen: 183 in der Interventionsgruppe und 176 in der Kontrollgruppe. Verschiedene Analysearten wurden angewandt, um unsere Hypothese zu prüfen. Eine deskriptive Analyse der Interventions- und der Kontrollgruppe sowie eine Kreuztabellierung wurden durchgeführt, um die charakteristischen Merkmale beider Gruppen zu erfassen und um Gemeinsamkeiten und Unterschiede zwischen ihnen aufzudecken. Kreuztabellierungen helfen dabei, die Beziehungen zwischen nominalen und ordinalen Variablen zu untersuchen.

Die Ergebnisse dieser Analysen sind selektiv in den Unterabschnitten 4.2-4.4 dargestellt. Alle entsprechenden statistischen Analysedaten werden detailliert in Anhang B.1 bis B.3 dargelegt. B.1 und B.2 umfassen die deskriptive Statistik, B.3 zeigt die Kreuztabellierung beider Untersuchungsgruppen. Ergebnistabellen der Antworten sowie Chi-Quadrat-Tests und vergleichende Balkendiagramme, von denen einige auch im Haupttext abgebildet sind, sind ebenfalls im Anhang enthalten.

Das Chi-Quadrat bietet uns ein Messverfahren für die statistische Signifikanz oder den Wahrscheinlichkeitswert und prüft die Hypothese, dass Zeilen- und Spaltenvariablen unabhängig voneinander sind bzw. nicht in Beziehung zueinander stehen. Um eine Beziehung als statistisch signifikant einzuordnen, muss der p-Wert so niedrig wie möglich sein. Der verwendete Wert ist kleiner als 0,05 (Konfidenzniveau von 95 %). In den Tabellen ist es deshalb wichtig, die „Pearson Chi-Quadrat“-Zeile in der „Asymp. Sig.“-Spalte zu prüfen. Wenn der p-Wert geringer als 0,05 ist, bedeutet dies, dass nur eine geringe Wahrscheinlichkeit besteht, dass die nachgewiesenen Unterschiede auf einen Zufall zurückzuführen sind.

Der in Abschnitt 4.4 dargestellte t-Test ermöglicht es uns, die Mittelwerte der beiden Probandengruppen miteinander zu vergleichen.

4.1 Vorarbeiten

Vor der Analyse aller Fragen und der letzten beiden Variablen in Bezug auf den persönlichen Hintergrund der Befragten wurden alle Fragen auf einer zum Positiven hin aufsteigenden Skala angeordnet. Daher entspricht eine positive Meinung zur Auswirkung der Technologie immer einem höheren Zahlenwert (d. h. 5 in unserem Fall), während eine negative Einstellung einem niedrigeren Zahlenwert entspricht (hier 1).

Variablen wie „Geschlecht“ oder „Beruf“ sind nominale Variablen, da die Befragten nur anhand eines bestimmten Merkmals unterschieden werden können. Variablen wie „Bildung“ oder die Fragen im Likert-Format sind ordinale Variablen, da die Befragten nach der Quantität eines bestimmten Merkmals sortiert werden können, über das sie verfügen. Variablen wie „Alter“ sind stetige Variablen, da es nicht nur möglich ist, Befragte auf der Basis eines Merkmals zu sortieren, sondern auch eine festgelegte Distanz zwischen zwei Befragten auf einer Skala zu bestimmen. Diese Typen von Variablen ermöglichen es uns, die am besten geeignete Analyse zu wählen.

Alle statistischen Analysen, die in diesem Bericht dargestellt werden, wurden mit SPSS 13.0 erstellt.

4.2 Deskriptive Statistik der Interventionsgruppe

Die Ergebnisse der deskriptiven Analyse werden in den folgenden Unterabschnitten gemäß den drei Abschnitten des Fragebogens diskutiert:

4.2.1 Persönlicher Hintergrund

Die Mehrheit der befragten Fernstudierenden übt eine technischen Tätigkeit aus (47), gefolgt von Befragten mit einer Leitungsfunktion (36), während die anderen drei Kategorien (Lehrtätigkeit oder Ausbilder(in), Studierende(r) und ohne Beschäftigung) zwischen 15 und 16 variieren. Nach der in Abschnitt 3.1 beschriebenen Änderung würde die Kategorie „technische Tätigkeit“ doppelt so hohe Werte erzielen, die Werte der Kategorien „Leitungsfunktion“ und „Ausbilder / Ausbilderin, Lehrtätigkeit“ würden unverändert bleiben und die der anderen nur leicht ansteigen.

Wie Abb. 5 veranschaulicht, liegt das Durchschnittsalter der Interventionsgruppe bei etwas über 30 Jahre.

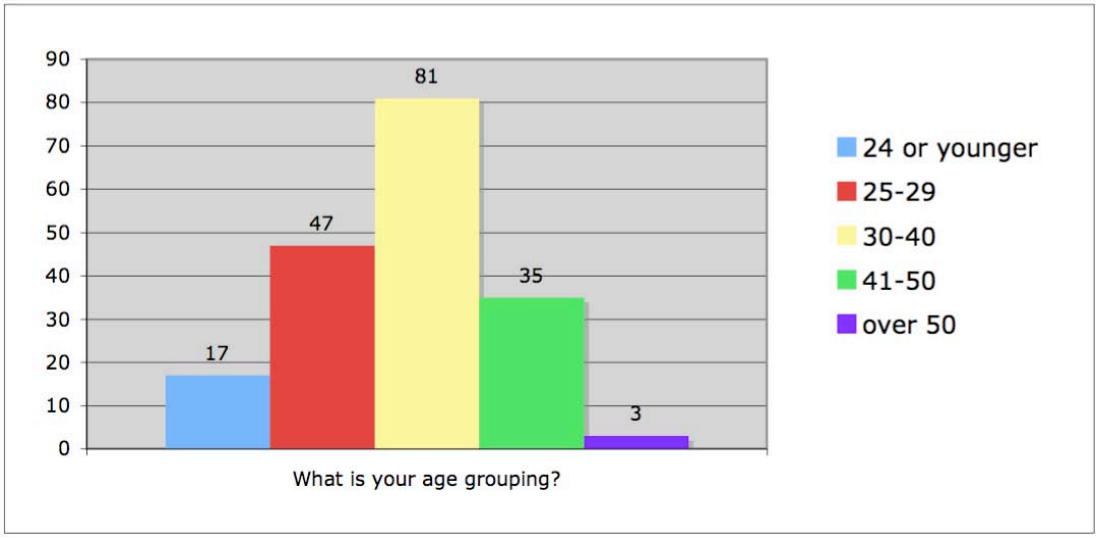

Abbildung 5: Altersverteilung der Interventionsgruppe

Mehr als die Hälfte der Befragten erwarb einen Abiturabschluss, 30 Personen verfügen über eine ein- bis dreijährige Hochschulausbildung, 53 Personen sogar über eine längere Hochschulausbildung.

Eine überwältigende Mehrheit von 131 Personen musste ihre Arbeitsweise auf Grund von technischen Entwicklungen ändern, 12 der Befragten dieser Gruppe mussten ihre Arbeitsweise mindestens einmal ändern.

4.2.2 Die Auswirkungen der IuK-Technologien auf das Lernen im Allgemeinen

Die Fragen in dem Abschnitt des Fragebogens, der sich mit den Auswirkungen der IuK-Technologien auf das Lernen im Allgemeinen befasst, bezieht sich sowohl auf generelle Eindrücke als auch auf spezifischere Eigenschaften, wie die Intensität des Kontaktes und der Kommunikation zwischen Lehrenden und Studierenden, die Vorteile für behinderte Studierende, die Förderung aktiver Teilnahme oder stärker individualisierte Programme.

Kommunikationstechnologien unterstützen synchrone und asynchrone Arten der Kommunikation, die sich von der persönlichen Kommunikation durch paralinguale Merkmale wie Lautstärke, Tonhöhe oder nonverbale Kommunikationsmittel wie Gesten und Gesichtsausdrücke unterscheiden, welche dabei helfen, Missverständnisse zu vermeiden (Schröder, Wankelmann; 2002).

Mehr als die Hälfte der Befragten sind der Ansicht, dass die Probleme des Bildungszugangs für behinderte Studierende gelöst wurden, 18 stimmen sogar voll und ganz zu, nur 54 sind unsicher, 12 stimmen eher nicht zu, und 3 sind gänzlich anderer Meinung. Ein anderes Bild ergibt sich, wenn die Intensität des Kontakts zwischen Studierenden und Lehrenden in einer direkten Kontaktsituation und im Online-Studium gleichgesetzt wird: Mehr Personen stimmen dieser Behauptung eher nicht zu, sind zum Teil sogar gänzlich anderer Meinung, als Personen weitgehend bzw. voll und ganz zustimmen (58 versus 87) und die Anzahl von Befragten, die unsicher sind, ist mit 38 Personen relativ gering. Der Beitrag der Online-Kommunikation zu einem höheren Grad an Kommunikation zwischen Lehrenden und Studierenden zeigt eine leicht positive Einstellung mit 84 Personen, die (voll und ganz) zustimmen, aber nur 48 Personen, die (entschieden) widersprechen. Die Unsicherheit bezüglich dieser Frage ist mit 51 Antworten relativ hoch. Die negativ formulierte Frage 10 *Nur Optimisten glauben, dass die Auswirkungen der IuK-Technologien auf das Lernen von Vorteil sind* unterstützt die positive Wahrnehmung der Auswirkungen von Technologien auf das Lernen mit 120 (entschiedenen) Widersprüchen. Dieser Eindruck wird noch verstärkt durch 150 positive Antworten auf Frage 11, das sich auf persönliche Erfahrungen bezieht. Diese positive Einstellung gegenüber den Auswirkungen von Technologien auf das Lernen ist etwas schwächer, wenn es um die Ermutigung der Studierenden geht, sich aktiver in den Lernprozess einzubringen. 94 antworten noch immer positiv, nur 25 antworten negativ in Bezug auf dieses Thema, aber 64 sind unsicher. Eine positive Einstellung zeigt sich ebenfalls hinsichtlich der Entwicklung kognitiv höherwertiger Lernprozesse und stärker individualisierter Lernangebote, aber die Anzahl der unsicheren Befragten liegt bei fast einem Drittel der Probandenauswahl. Eine relativ starke Zustimmung kann im Hinblick auf den Eindruck verzeichnet werden, dass Lernen verstärkt wird, wenn multimediale Komponenten in den Lerninhalt integriert sind (siehe Abb. 6). Der Motivationsfaktor von Lernspielen wird ebenfalls als positiv empfunden, aber 52 Befragte sind sich unsicher, was vermutlich daraus resultieren könnte, dass sie nicht über entsprechende Erfahrungen verfügen, und 33 sind eher negativ eingestellt.

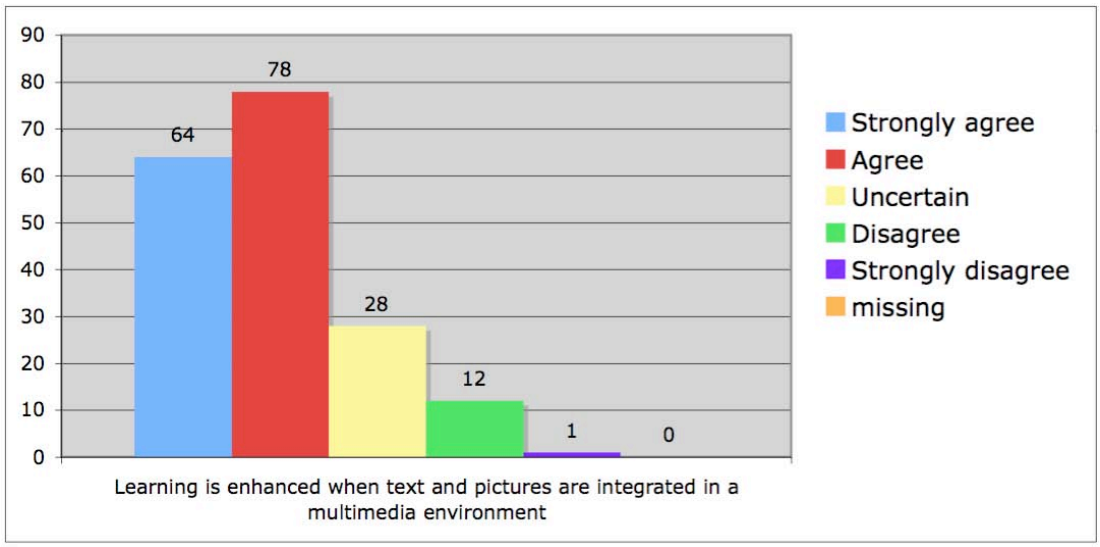

Abbildung 6: Die positiven Auswirkungen multimedialer Umgebungen auf das Lernen

4.2.3 Die Auswirkungen der IuK-Technologien auf das Lernen an Fernuniversitäten

Der dritte Abschnitt des Fragebogens befasst sich besonders mit Wahrnehmungen und Meinungen bezüglich der Auswirkungen der IuK-Technologien auf das Lernen an Fernuniversitäten. Diese Gruppe von 5 Fragen bezieht sich auf Gesichtspunkte wie die folgenden:

- verbesserte administrative Prozesse, die für Studierende von Belang sind,
- erleichterten Zugang zu Studienmaterialien für Teilzeitstudien,
- Ansichten in Bezug auf die Aussage, dass das Studieren an Fern- und Präsenzuniversitäten und die Universitätsabschlüsse, die von beiden Systemen vergeben werden, dem gleichen Standard entsprechen, und
- der Beurteilung eines grundlegenden Arguments für Fernuniversitäten, und zwar dass diese besonders Erwachsenen Vorteile bieten, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen.

Die Verbesserungsfaktoren werden in hohem Maße bestätigt durch einen höheren Wert der starken Zustimmung und mit nur etwa 7 % der Probanden, die unsicher sind. Widerspruch ist mit 3 und 7 zu vernachlässigen. Dass von traditionellen Präsenzuniversitäten und Fernuniversitäten vergebene Abschlüsse vergleichbar sind, wird ebenfalls positiv betrachtet mit einem leicht höheren Wert bei den unsicheren und negativen Beurteilungen (siehe Abb. 7). Im Hinblick auf den Studienerfolg der Systeme dominiert die (volle) Zustimmung mit 85 Probanden gegenüber 37 Widersprüchen; der Unsicherheitsfaktor ist jedoch mit 61 Probanden recht hoch. Mit 165 voll zustimmenden Probanden und 14 zusätzlichen Zustimmungen zu der These, dass das Studium an einer Fernuniversität besonders für Erwachsene Vorteile hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen, wird deutlich, dass Politiker, die die Einrichtung dieser Institutionen in den 1970ern und 1980ern unterstützt haben, die richtige Entscheidung getroffen haben.

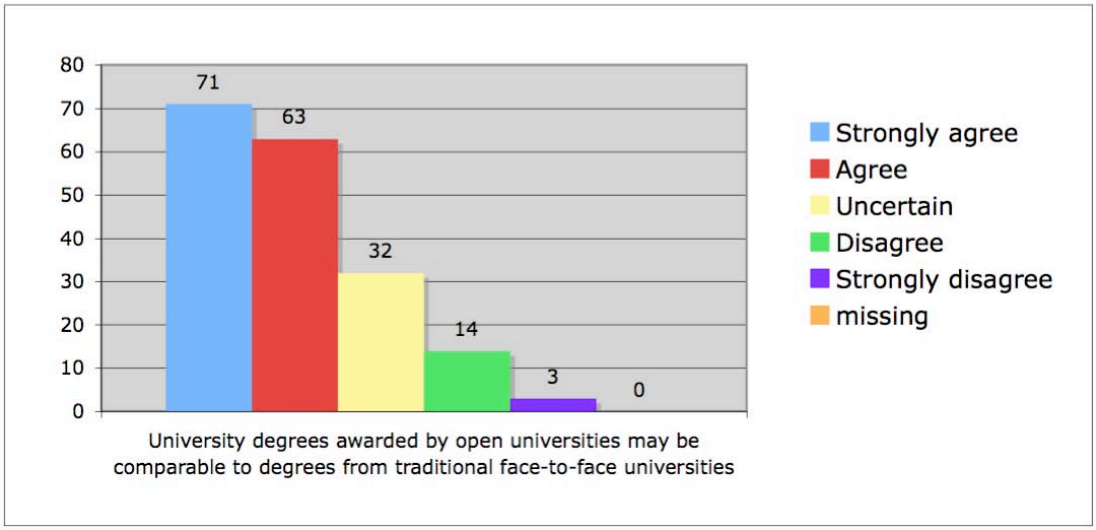

Abbildung 7: Vergleichbarkeit der von Präsenz- und Fernuniversitäten vergebenen Universitätsabschlüsse

4.3 Deskriptive Statistik der Kontrollgruppe

Wir übernehmen die Struktur der Erörterung im vorhergehenden Abschnitt mit drei Unterabschnitten.

4.3.1 Persönlicher Hintergrund

Die Probanden der Kontrollgruppe sind größtenteils in erzieherischen Positionen als Lehrende, Ausbilder(innen) oder Studierende tätig (125). 30 Personen besetzen Leitungspositionen, 11 Personen üben technische Tätigkeiten aus, und 8 Personen sind ohne Beschäftigung. Zwei Personen beantworteten diese Frage nicht. Angaben zum Alter: 43 Personen sind jünger als 24 Jahre. 43 sind zwischen 24 und 29 Jahre alt, 39 Personen sind zwischen 30 und 39 Jahre alt, 29 Personen sind zwischen 40 und 49 Jahre alt und 22 Personen über 50 Jahre alt. Weibliche Teilnehmer dominieren mit 108 gegenüber 66 männlichen Teilnehmern in der Kontrollgruppe. Bezüglich des Bildungsabschlusses verfügen 79 Personen über Abitur, 37 Personen über eine Hochschulausbildung bis zu drei Jahren und 57 Personen über eine Hochschulausbildung von drei und mehr Jahren. Die Mehrheit der Befragten musste ihre Arbeitsweise einmal oder öfter (17 beziehungsweise 100) an eine moderne technische Ausstattung anpassen, während etwa ein Drittel hat diese Erfahrung nicht gemacht.

4.3.2 Die Auswirkungen der IuK-Technologien auf das Lernen im Allgemeinen

Die Einstellung hinsichtlich der Aussage, dass das Problem des Bildungszugangs im Allgemeinen für behinderte Studierende gelöst wurde, wird von fast der Hälfte der Probanden geteilt, aber etwa ein Drittel der Befragten ist unsicher, und 28 Personen widersprechen dieser These. Nur 37 Befragte stimmen der Aussage zu, dass die Intensität der Kontakte im Präsenzstudium und in der Online-Lehre vergleichbar ist. 19 Personen sind unsicher, und eine große Mehrheit von 117 Personen lehnt diese Position ab. Eine etwas größere Gruppe von Befragten ist überzeugt, dass Online-Kommunikationsmechanismen dazu beigetragen haben, die Kommunikation zwischen Lehrenden und Studierenden zu intensivieren, aber ein beachtlicher Anteil ist unsicher oder bezweifelt diese Behauptung (siehe Abb. 8).

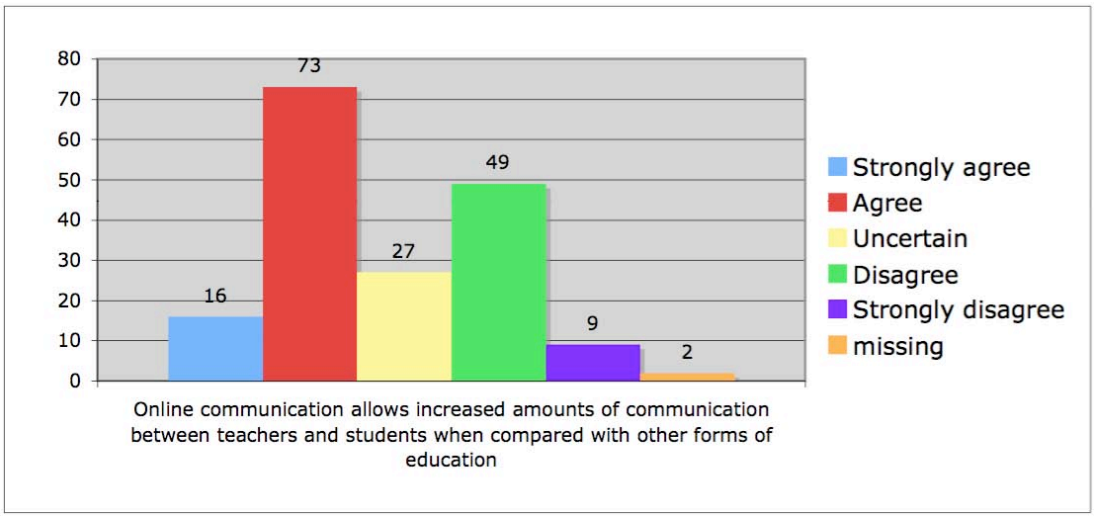

Abbildung 8: Online-Kommunikation hat die Interaktion zwischen Lehrenden und Studierenden gesteigert

Die negativ formulierte Frage 10 hat die Gruppe nicht irregeführt, da mehr als 100 Befragte widersprachen, was ihre weitgehend positive Meinung bezüglich der Auswirkungen der IuK-Technologien auf das Lernen im Allgemeinen bestätigt. Dies wird verstärkt durch 148 positive Antworten auf die positive Formulierung dieser Position unter dem Eindruck persönlicher Studienerfahrung (Frage 11). Die Behauptung, dass IuK-Technologien Studierende ermutigt, sich aktiv in den Lernprozess einzubringen, wird ebenfalls positiv beantwortet, jedoch sind 50 Befragte unsicher, und 28 Personen widersprechen. Ein ähnliches Bild ergibt sich bei den Antworten zu der Behauptung, dass die IuK-Technologien eingesetzt wurden, um die Entwicklung kognitiv höherwertiger Lernprozesse zu unterstützen, die es Studierenden ermöglichen, einen Sachverhalt zu beurteilen oder durch das Kombinieren von Elementen zu einem zusammenhängenden, funktionierendem Ganzen etwas Neues zu schaffen. Die Unterstützung der Aussage, dass die IuK-Technologien eingesetzt wurden, um Lehrangebote auf individuelle Bedürfnisse abzustimmen, ist sogar noch größer, und noch stärker ist die Zustimmung hinsichtlich der These, dass Lernen verstärkt wird, wenn Lehrtexte und Bilder in eine multimediale Lernumgebung integriert sind und Lernspiele Studierende motivieren und dazu beitragen, soziale Fähigkeiten zu entwickeln.

4.3.3 Die Auswirkungen der IuK-Technologien auf das Lernen an Fernuniversitäten

Eine interessante Beobachtung in Verbindung mit dieser Gruppe von Fragen ist die relativ hohe Anzahl von mehr als 20 fehlenden Antworten, wohingegen sonst nur weniger als 5 Antworten fehlen.

Überwältigend ist die Zustimmung zu der These, dass moderne IuK-Konzepte das Fernstudiensystem und die administrativen Prozesse, die für Studierende von Belang sind, verbessert haben. Die Aussage, dass IuK-Technologien den Zugang zu Studienmaterialien für Teilzeitstudierende erleichtern, wird mit 97 vollen Zustimmungen und 45 Zustimmungen gegenüber 9 unsicheren Positionen und 3 Widersprüchen sogar noch stärker unterstützt. Die Antworten zu der These über die Vergleichbarkeit der Universitätsabschlüsse, die von Präsenz- und Fernuniversitäten vergeben werden, zeigen ein großes Ausmaß an Unsicherheit in dieser Gruppe, mit einer leichten Tendenz zum Widerspruch (siehe Abb. 9).

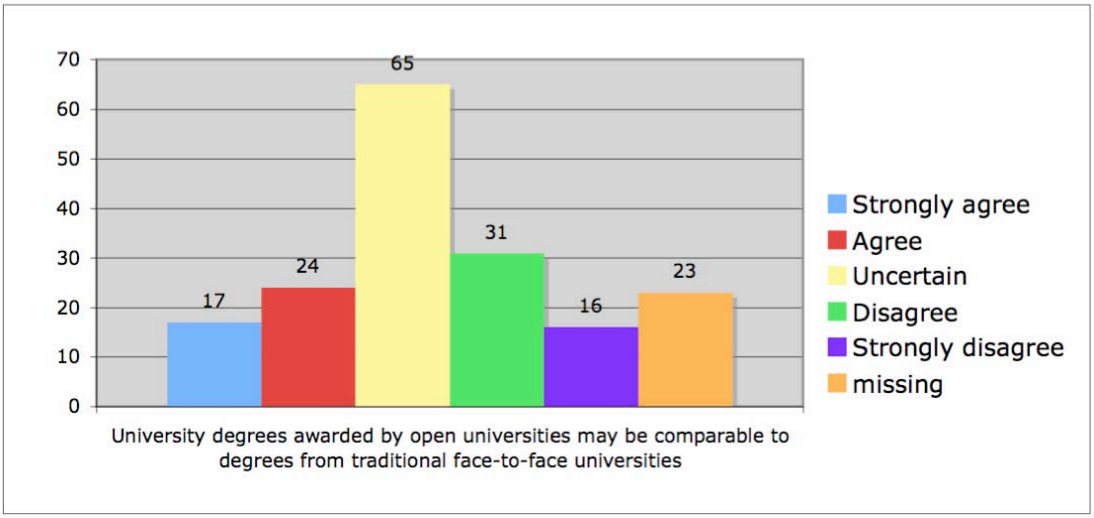

Abbildung 9: Die Beurteilung der Vergleichbarkeit der Studienabschlüsse durch die Kontrollgruppe (siehe ebenfalls Abb. 6)

Die Grafik zu den Meinungen bezüglich des Studienerfolgs an Fern- und Präsenzuniversitäten zeigt ein ähnliches Ergebnis. Schließlich verzeichnen wir eine extrem hohe (volle) Zustimmung zu der Behauptung, dass das Studium an einer Fernuniversität besonders für

Erwachsene Vorteile hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen.

4.4 Abweichungen zwischen Interventions- und Kontrollgruppe

Es wurden Kreuztabellierungen eingesetzt, um Unterschiede zwischen den beiden Probandengruppen aufzudecken. Alle Kreuztabellen, die sich auf die beiden Studiengruppen beziehen, werden in Anhang B.3 dargestellt.

4.4.1 Persönlicher Hintergrund

In der Kontrollgruppe findet man eine ähnliche Anzahl von Personen in Leitungspositionen wie in der Interventionsgruppe, jedoch weitaus weniger technische Angestellte (siehe Tabelle 1). Die Kontrollgruppe umfasst außerdem eine größere Anzahl an Lehrenden und Studierenden.

Tabelle 1: Verteilung der beruflichen Tätigkeiten in beiden Gruppen

		Main group/Control group		
		Main group	Control group	Total
What is your occupation?	Manager	36	30	66
	Technical	47	11	58
	Teacher or Trainer	16	66	82
	Student	16	59	75
	Unemployed	15	8	23
	Other (e.g. retired)	53	0	53
Total		183	174	357

Die Kontrollgruppe zeigt eine relativ homogene Verteilung auf alle Altersklassen, während die Interventionsgruppe eine Gauß-ähnliche Verteilung aufweist, deren Maximum bei 30-40 Jahren liegt (siehe Abb. 10).

Mit 42 mehr weiblichen als männlichen Befragten ist die Geschlechterverteilung in der Kontrollgruppe etwas weniger ausgeglichen als in der Interventionsgruppe. Diese Unterschiede sind in einem Balkendiagramm und einer Tabelle sowie durch den Chi-Quadrat-Test auf der Seite 5 in Anhang B.3 veranschaulicht.

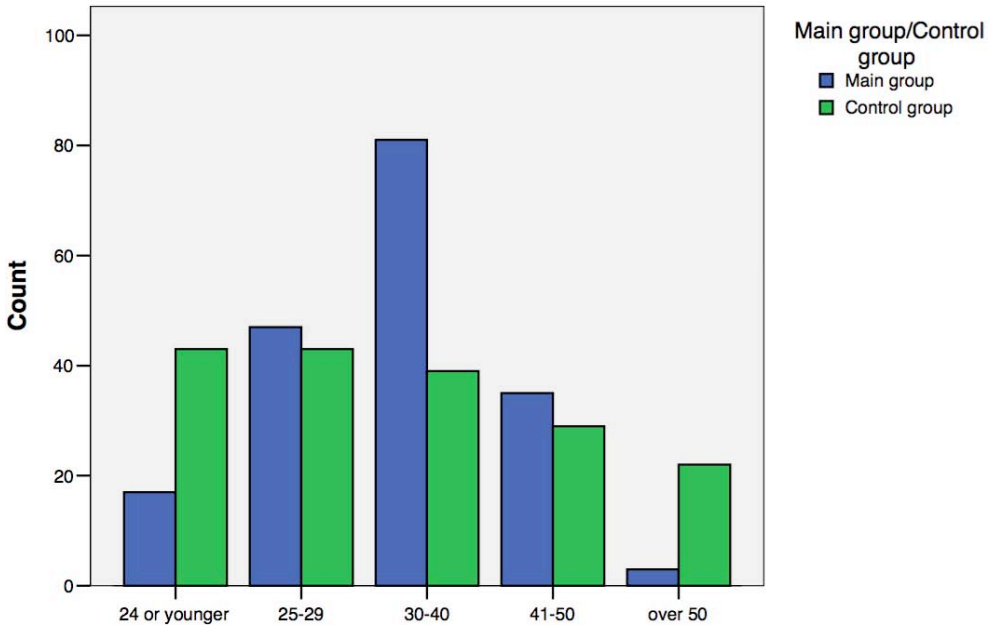

Abbildung 10: Welche ist Ihre Altersgruppe?

Die Grafik, die den Bildungsabschluss, Erfahrungen mit dem Einsatz moderner Technologien und die Notwendigkeit, sich an neue Technologien anzupassen, veranschaulicht, zeigt keine signifikante Abweichung in Bezug auf die Aspekte Bildungsabschluss und Erfahrung mit neuen Technologien (siehe Anhang B.3, Seiten 6-8). In Bezug auf Notwendigkeiten, sich technischen Neuerungen anzupassen, erkennt man jedoch signifikante Abweichungen zwischen der Interventions- und der Kontrollgruppe. Das Verfahren Pearson Chi-Quadrat errechnet einen signifikanten Unterschied mit einem Wert von 0,029. Die Kontrollgruppe hat tendenziell weniger Erfahrungen mit technologiebedingten Änderungen von Arbeitsweisen gemacht. Ein Grund könnte darin liegen, dass die Interventionsgruppe vergleichsweise mehr technische Angestellte umfasst, aber auch das höhere Alter könnte die Tendenz beeinflussen.

4.4.2 Die Auswirkungen der IuK-Technologien auf das Lernen im Allgemeinen

Die Balkendiagramme und Tests in Anhang B3, Seiten 9-18 zeigen die Ergebnisse zu den Fragen 7 bis 16. Folgenden Beobachtungen fallen zu den Antworten auf einige Fragen auf, immer gesehen im Vergleich zwischen Interventions- und Kontrollgruppe:

- Die Aussage, dass die Probleme des Bildungszugangs für behinderte Studierende gelöst wurden (Frage 7, Seite B3-9), wird in der Interventionsgruppe eher positiv beantwortet, während in der Kontrollgruppe Zustimmung und Unentschiedenheit den größten Anteil haben und nahe bei einander liegen. Die höhere Zustimmung in der Interventionsgruppe könnte darin liegen, dass Fernstudierende den Einsatz der IuK-Technik eher als andere als Mittel zur Überbrückung der räumlichen Distanz zwischen den Beteiligten sehen.
- Die Haltung der Befragten zur These 8 (B3-10), dass die Kontakte zwischen Studierenden und Lehrenden bei der Online-Lehre von gleicher Intensität sein können wie beim Präsenzstudium, ist in beiden Gruppen eher ablehnend mit einer signifikant positiveren Tendenz in der Interventionsgruppe. Auch hier spielen möglicherweise unterschiedliche Erfahrungshintergründe bei Fernstudierenden (eingeschränkte Kontaktmöglichkeiten früher) eine Rolle.
- Zu Aussage 9, dass Online-Kommunikation einen höheren Grad an Informationsaustausch zwischen Lehrenden und Studierenden im Vergleich zu anderen Bil-

dungsformen ermöglicht hat, ist das Ausmaß der Unsicherheit in der Kontrollgruppe deutlich geringer als bei der Interventionsgruppe, die Meinungen verteilen sich aber relativ gleich auf Zustimmung und Ablehnung (B3-11). Hier ist zu vermuten, dass die Teilnehmer der Kontrollgruppe leichter eine Meinung fassen können, weil sie – anders als viele Fernstudierende – andere Arten des Unterrichts meist selbst erfahren haben.

- Die negative Aussage 10 bezüglich der Vorteile der Technologien für das Lernen wird von beiden Gruppen mehrheitlich verneint (d.h. Vorteile werden durchaus gesehen), wobei eine signifikant höhere Negation in der Interventionsgruppe zu sehen ist (B3-12).
- Die Meinungen zu den Fragen 14, dass IuK-Technologien eingesetzt wurden, um stärker individualisierte Lehrangebote bereit zu stellen, und 16, dass Lernspiele Studierende motivieren, sind in der Kontrollgruppe leicht positiver als in der Interventionsgruppe. Diese Beobachtung könnte man damit erklären, dass Anwendungen IuK-Technologien in der Kontrollgruppe eher als Zusatzangebot und Bereicherung des Unterrichts gesehen wird, während die Interventionsgruppe solche Anwendungen möglicherweise als Ersatz für herkömmliche Fernstudienmethoden begreift.

4.4.3 Die Auswirkungen der IuK-Technologien auf das Lernen an Fernuniversitäten

In der dritten Frage-Gruppe findet man wieder starke Übereinstimmungen zwischen beiden Gruppen in Bezug auf die Beurteilung der angeführten Verbesserung des Fernstudiensystems durch den Einsatz von IuK-Technologien beim Lernen und für administrative Prozesse.

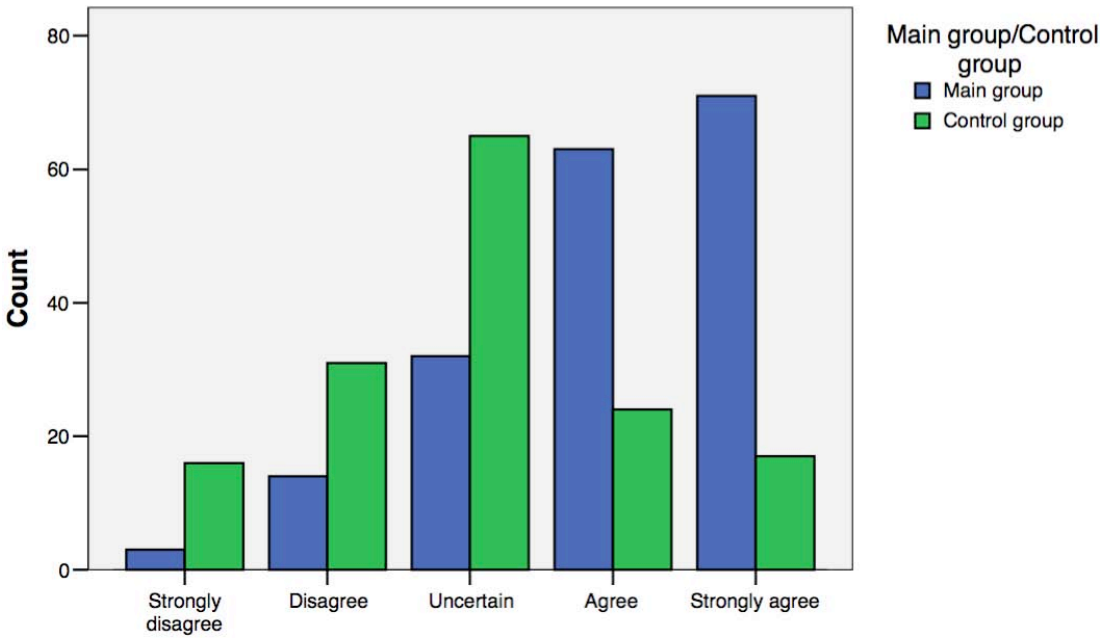

Abbildung 11: Von Fernuniversitäten vergebene Universitätsabschlüsse sind mit den von Präsenzuniversitäten verliehenen Abschlüssen vergleichbar

Erleichterter Zugang zu Studienmaterialien wird ebenfalls in beiden Gruppen ähnlich eingeschätzt, und der Pearson Chi-Quadrat-Test zeigt keine signifikanten Unterschiede bezüglich der Einstellungen an.
Ein auffälliger Unterschied zeigt sich in der Meinung der Befragten bezüglich der Vergleichbarkeit der Abschlüsse, die von Präsenz- und Fernuniversitäten verliehen werden

(Frage 19): Die Kontrollgruppe ist hinsichtlich dieses Aspektes weniger gewiss als die Interventionsgruppe, wie in Abb. 11 deutlich wird, denn mehr als 42% der Kontrollgruppe sind sich Ihrer Bewertung unsicher, während Zustimmung und Ablehnung in dieser Gruppe fast im Gleichgewicht sind. In der Interventionsgruppe dagegen herrscht eine wesentlich breitere Zustimmung vor. Der Pearson Chi-Quadrat-Test auf Seite 21 in Anhang B.3 belegt diese Beobachtung. Der Grad des Widerspruchs und der Unsicherheit ist in der Kontrollgruppe fast doppelt so hoch wie in der Interventionsgruppe.

Analoge Unterschiede ergeben sich bezüglich der Qualität des Studienerfolgs in beiden Systemen (Frage 20), hier jedoch in beiden Gruppen mit einem Schwerpunkt auf Indifferenz in der Bewertung. Dies wird auch durch den Chi-Quadrat-Test bestätigt (Anhang B.3, Seite 22). Letztendlich bestehen in der Kontrollgruppe etwas stärkere Zweifel in Bezug auf den spezifischen Vorteil des Fernstudiensystems als in der Interventionsgruppe. Dies kann möglicherweise durch die fehlende Erfahrung der Probanden in der Kontrollgruppe erklärt werden.

Der enge Zusammenhang dieser Fragen wird nicht nur durch die ähnliche Intentionen und ähnlich Antworttendenzen der beiden Gruppen belegt, sondern auch durch Spearmans Korrelationstest (0,614).

Die Zustimmung zu Frage 21 (das Studieren an Fernuniversitäten ist von besonderem Vorteil für Erwachsene mit Arbeits- und Familienverpflichtungen) ist überwältigend, wobei sie in der Interventionsgruppe noch signifikant höher sind.

4.5 t-Test

Der auf unsere beiden Testgruppen angewandte t-Test ermöglicht uns den Vergleich des Mittelwerts beider Gruppen. Diese Werte werden in Tabelle 2 dargestellt. Höhere Werte werden in rot dargestellt. Zeilen mit grünem Hintergrund enthalten Variablen, deren Werte sich deutlich unterscheiden.

Unabhängige Beispieltests, die ebenfalls berechnet wurden, sind in Anhang B.4 enthalten.

Tabelle 2: Vergleich der Mittelwerte von Interventions-und Kontrollgruppe für eine Auswahl von Fragen

	Hauptgruppe				Kontrollgruppe			
Frage	*Gültig*	*Fehlend*	*Mittel-wert*	*Bereich*	*Gültig*	*Fehlend*	*Mittel-wert*	*Bereich*
Nur Optimisten glauben, dass die Auswirkungen der IuK-Technologien auf das Lernen von Vorteil sind.	183	0	3,72	4	174	2	3,4	4
Aus meiner persönlichen Studienerfahrung heraus finde ich, dass IuK-Technologien das Lernen bereichern.	183	0	4,12	4	174	2	4,1	4
IuK-Technologien werden vor allem eingesetzt, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen.	183	0	3,44	4	174	2	3,48	4
IuK-Technologien werden eingesetzt, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen.	183	0	3,36	4	175	1	3,42	4
IuK-Technologien werden eingesetzt, um individualisierte Lehrangebote bereit zu stellen, die auf die Bedürfnisse einzelner Studierender zugeschnitten sind.	183	0	3,37	4	172	4	3,65	4

Lernen wird verstärkt, wenn Lehrtexte und Bilder oder Animationen in eine multimediale Lernumgebung integriert sind.	183	0	4,05	4	174	2	4,18	4
Lernspiele motivieren Studierende und tragen dazu bei, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln.	183	0	3,46	4	173	3	4,06	4
Der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, hat das Fernstudiensystem verbessert.	183	0	4,42	3	153	23	4,06	4
IuK-Technologien erleichtern den Zugang zu Studienmaterialien für Teilzeitstudierende.	183	0	4,38	4	154	22	4,53	3
Universitätsabschlüsse, die von Fernuniversitäten vergeben werden, sind mit den von Präsenzuniversitäten verliehenen vergleichbar.	183	0	4,01	4	153	23	2,97	4
Es gibt keinen Unterschied im Studienerfolg zwischen Absolventinnen und Absolventen von Fernuniversitäten und von Präsenzuniversitäten.	183	0	3,44	4	152	24	2,77	4
Das Studium an einer Fernuniversität hat Vorteile besonders für Erwachsene, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen.	183	0	4,86	4	154	22	4,44	4
Dank moderner IuK-Technologie ist das Problem des Bildungszugangs für behinderte Studierende gelöst.	183	0	3,52	4	176	0	3,41	4
Kontakte zwischen Studierenden und Lehrenden können bei der Online-Lehre von gleicher Intensität sein wie beim Präsenzstudium.	183	0	2,84	4	173	3	2,37	4
Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen.	183	0	3,29	4	174	2	3,22	4

5 KREUZTABELLIERUNG VON PERSÖNLICHEM HINTERGRUND UND TECHNOLOGIEBEZOGENEN VARIABLEN

Eine Kreuztabellierung wurde vorgenommen, um den Zusammenhang zwischen persönlichen Hintergrundvariablen wie Alter, Geschlecht, Beruf usw. und Ansichten zum Einsatz der Technologie in der Hochschulbildung im Allgemeinen und dem Studium an Fernuniversitäten im Besonderen zu analysieren. Kreuztabellierungen unterstützen uns bei der Untersuchung der Zusammenhänge zwischen nominalen und ordinalen Variablen.

Variablen wie „Geschlecht“ oder „Beruf“ sind nominale Variablen, da die Befragten nur anhand eines bestimmten Merkmals unterschieden werden können. Variablen wie „Bildung“ oder die Fragen im Likert-Format sind ordinale Variablen, da die Befragten nach der Quantität eines bestimmten Merkmals sortiert werden können, über das sie verfügen. Variablen wie „Alter“ sind stetige Variablen, da es nicht nur möglich ist, Befragte basierend auf einem Merkmal zu sortieren, sondern auch eine festgelegte Distanz zwischen zwei Befragten auf einer Skala zu bestimmen. Diese Typen von Variablen ermöglichen es uns, die am besten geeignete Art von Analyse auszuwählen.

Vor der Analyse aller Fragen und der letzten beiden Variablen in Bezug auf den persönlichen Hintergrund der Befragten wurden alle Fragen auf einer zum Positiven hin aufsteigenden Skala angeordnet. Daher entspricht eine positive Meinung zur Auswirkung der Technologie immer einem höheren Zahlenwert (in unserem Beispiel 5), während eine negative Meinung einem niedrigeren Zahlenwert entspricht (hier: 1).

Die Ergebnisse dieser Analysen werden in den folgenden Unterabschnitten selektiv dargestellt. Eine Übersichtstabelle für die Antworten zu allen verbleibenden Fragen ist genauso enthalten wie Chi-Quadrat-Tests und vergleichende Balkendiagramme, von denen einige im folgenden Text dargestellt werden. Alle statistischen Analysedaten werden detailliert in den Anhängen B.5 bis B.8 dargestellt.

Chi-Quadrat bietet uns ein Messverfahren für die statistische Signifikanz oder den Wahrscheinlichkeitswert und prüft die Hypothese, dass Zeilen- und Spaltenvariablen unabhängig voneinander sind bzw. nicht in Beziehung zueinander stehen. Um eine Beziehung als statistisch signifikant einzuordnen, muss der p-Wert so niedrig wie möglich sein. Der verwendete Wert beträgt weniger als 0,05 (Konfidenzniveau von 95 %). In den Tabellen ist es daher erforderlich, die Zeile „Pearson Chi-Quadrat“ in der Spalte „Asymp. Sig.“ zu prüfen. Beträgt der p-Wert weniger als 0,05, bedeutet dies, dass nur eine geringe Wahrscheinlichkeit besteht, dass die nachgewiesenen Unterschiede auf einen Zufall zurückzuführen sind.

5.1 Einfluss des Alters auf die Meinungen von Personen

Das Ausmaß, in dem unsere Befragten in ihrem beruflichen Umfeld moderne technische Ausstattung eingesetzt haben, ist altersunabhängig.

In Tabelle 3 wird dargestellt, dass Personen im Alter zwischen 30 und 50 ihre Arbeitsweise häufiger auf Grund von technologischen Entwicklungen geändert haben als Personen im Alter von unter 30 Jahren. Der Wert A-Sig. des in Tabelle 4 abgebildeten Pearson Chi-Quadrat-Tests gibt die Signifikanz mit 0,01 unterhalb des Signifikanzniveaus an.

Tabelle 3: Mussten Sie Ihre Arbeitsweise auf Grund von technischen Entwicklungen ändern?

			What is your age		
			41-50	over 50	Total
Have you had to change your way of working because of technological developments?	Yes, more than once	Count	49	19	231
		Expected Count	40,3	16,3	231,0
	Yes. Once	Count	6	3	29
		Expected Count	5,1	2,0	29,0
	No	Count	7	3	95
		Expected Count	16,6	6,7	95,0
Total		Count	62	25	355
		Expected Count	62,0	25,0	355,0

Tabelle 4: Chi-Quadrat-Test angewandt auf Tabelle 3

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22,591[a]	8	,004
Likelihood Ratio	23,667	8	,003
Linear-by-Linear Association	18,033	1	,000
N of Valid Cases	355		

Die Frage *Dank moderner IuK-Technologie ist das Problem des Bildungszugangs für behinderte Studierende gelöst* zeigt große Unterschiede für Befragte im Alter von unter 24 Jahren im Vergleich zu Befragten im Alter zwischen 25 und 29 Jahren. Erstere haben eine negativere Einstellung, während Personen im Alter zwischen 25 und 29 Jahren eine positivere Einstellung haben (siehe Abb. 12).

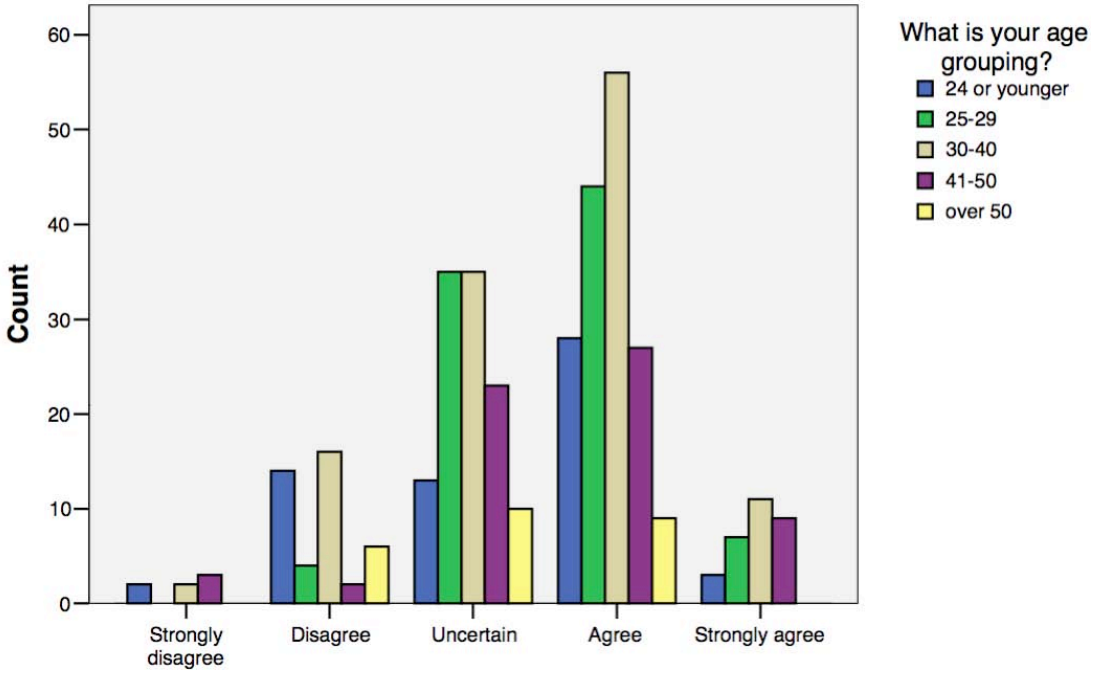

Abbildung 12: Dank moderner IuK-Technologie ist das Problem des Bildungszugangs für behinderte Studierende gelöst

Hinsichtlich der Ansichten zu den Behauptungen:

- *Kontakte zwischen Studierenden und Lehrenden können bei der Online-Lehre von gleicher Intensität sein wie beim Präsenzstudium*,
- *Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen*,
- *Nur Optimisten glauben, dass die Auswirkungen der Iuk-Technologien auf das Lernen von Vorteil sind,* und
- *Aus meiner persönlichen Studienerfahrung heraus finde ich, dass IuK-Technologien das Lernen bereichern*

konnte keine Signifikanz in Bezug auf die Alter der Befragten nachgewiesen werden (siehe auch Anhang B.5, Seiten 10-16).

Bezüglich Frage 12 des Fragebogens sind mehr Personen im Alter von 24 Jahren (oder jünger) der Ansicht, dass *IuK-Technologien vor allem eingesetzt werden, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen* (siehe Tabelle 5 unten und Anhang B4, Seiten 17 und 18).

Tabelle 5: IuK-Technologien werden vor allem eingesetzt, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen

			What is your age grouping?		
			24 or younger	25-29	30-40
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	Count	0	2	3
		Expected Count	,8	1,2	1,7
	Disagree	Count	6	15	13
		Expected Count	8,1	12,0	16,0
	Uncertain	Count	18	27	41
		Expected Count	19,2	28,4	38,0
	Agree	Count	22	41	55
		Expected Count	26,7	39,6	53,0
	Strongly agree	Count	14	4	7
		Expected Count	5,2	7,7	10,3
Total		Count	60	89	119
		Expected Count	60,0	89,0	119,0

Eine größere Anzahl von Personen im Alter von unter 25 Jahren ist folgender Ansicht:

- *IuK-Technologien werden eingesetzt, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen,* und
- *IuK-Technologien werden eingesetzt, um individualisierte Lehrangebote bereit zu stellen, die auf die Bedürfnisse einzelner Studierender zugeschnitten sind*

Pearsons Chi-Quadrat-Test zeigt jedoch nur im ersten, nicht aber im zweiten Fall signifikante Unterschiede (siehe auch Anhang B.5, Seiten 20-22).

Die Beurteilung der Aussagen

- *Lernen wird verstärkt, wenn Lehrtexte und Bilder oder Animationen in eine multimediale Lernumgebung integriert sind,* und
- *Lernspiele motivieren Studierende und tragen dazu bei, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln.*

Ist nicht signifikant in Bezug auf die Variable Alter (Anhang B.5, Seiten 23-26).

Dass *der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, das Fernstudiensystem verbessert hat*, trifft bei einer größeren Anzahl an Befragten im Alter von zwischen 30 und 40 Jahren auf Zustimmung als bei anderen Altersgruppen (siehe Abb. 13 und Anhang B.5, S. 28).

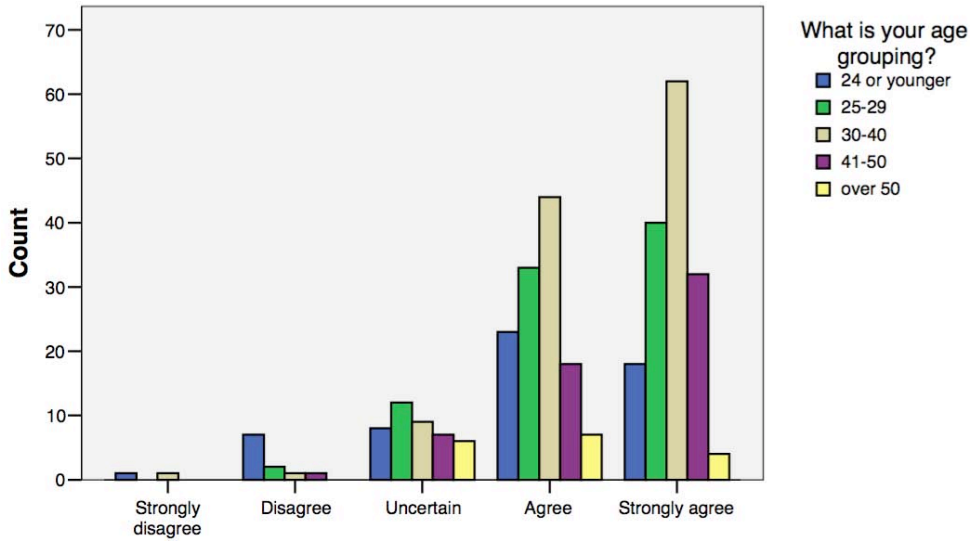

Abbildung 13: Der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, hat das Fernstudiensystem verbessert

Die Ansichten zu der These *IuK-Technologien erleichtern den Zugang zu Studienmaterialien für Teilzeitstudierende* sind nicht signifikant in Bezug auf Variable Alter.

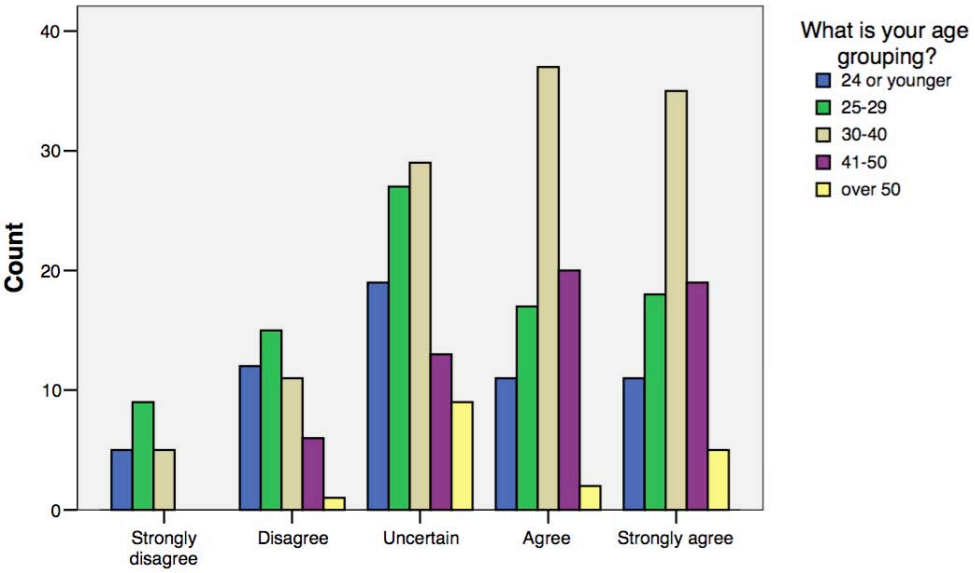

Abbildung 14: Universitätsabschlüsse, die von Fernuniversitäten vergeben werden, sind mit den von Präsenzuniversitäten verliehenen vergleichbar

Personen im Alter von unter 30 Jahren haben eine negativere Einstellung als Personen im Alter von zwischen 30 und 50 Jahren gegenüber folgenden Aussagen:

- *Universitätsabschlüsse, die von Fernuniversitäten vergeben werden, sind mit den von Präsenzuniversitäten verliehenen vergleichbar.*
- *Es gibt keinen Unterschied im Studienerfolg zwischen Absolventinnen und Absolventen von Fernuniversitäten und von Präsenzuniversitäten.*

(Siehe auch Abb. 14 und Anhang B.5, Seiten 31-34.)
Dass das Studium an einer Fernuniversität besonders für Erwachsene Vorteile hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen, wird unabhängig von der Altersgruppe bewertet.

5.2 Einfluss des Geschlechts

Die vollständigen Ergebnisse der Kreuztabellierung der Variablen Geschlecht mit technologiebezogenen Fragen werden in Anhang B.6 dargestellt. In diesem Abschnitt werden nur diejenigen Fragen erörtert, die eine signifikante Abhängigkeit vom Geschlecht der Befragten zeigen.

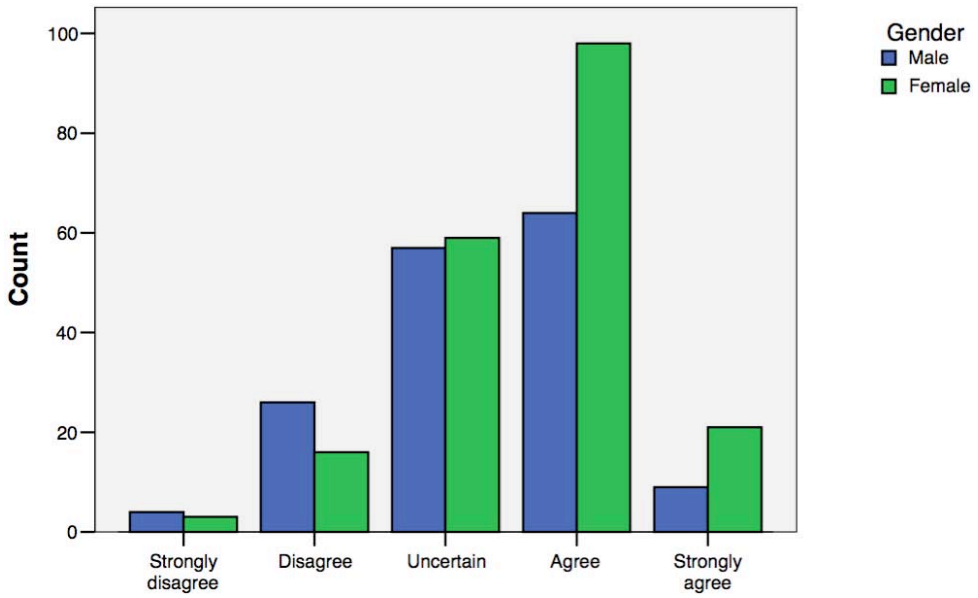

Abb. 15: Dank moderner IuK-Technologie ist das Problem des Bildungszugangs für behinderte Studierende gelöst

Unsere Studie beweist Folgendes:

- Mehr weibliche Befragte sind der Ansicht, dass *das Problem des Bildungszugangs für behinderte Studierende dank moderner Iuk-Technologie gelöst wurde* (Frage 7, siehe Abb. 14).
- Mehr weibliche Befragte sind der Ansicht, dass *Online-Kommunikation einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen ermöglicht* (Frage 9).
- Mehr weibliche Befragte sind der Ansicht, dass *IuK-Technologien vor allem eingesetzt werden, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen* (Frage 12).
- Mehr weibliche Befragte sind überzeugt, dass *Lernspiele Studierende motivieren und dazu beitragen, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln* (Frage 16).
- Mehr weibliche Befragte stimmen eindeutig zu, dass *der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, das Fernstudiensystem verbessert hat* (Frage 17).

Zusammenfassend kann festgehalten werden, dass weibliche Personen eine positivere Einstellung hinsichtlich der Auswirkungen von IuK-Technologien auf das Lernen sowohl im Präsenzstudium als auch im Fernstudium haben.

5.3 Einfluss des Bildungsabschlusses

Auch hier wird der Einfluss des Bildungsabschlusses auf die Ansichten der Befragten nur erörtert, wenn er signifikant ist.

Die vollständigen Analyseergebnisse werden detailliert in Anhang B.7 dargestellt.

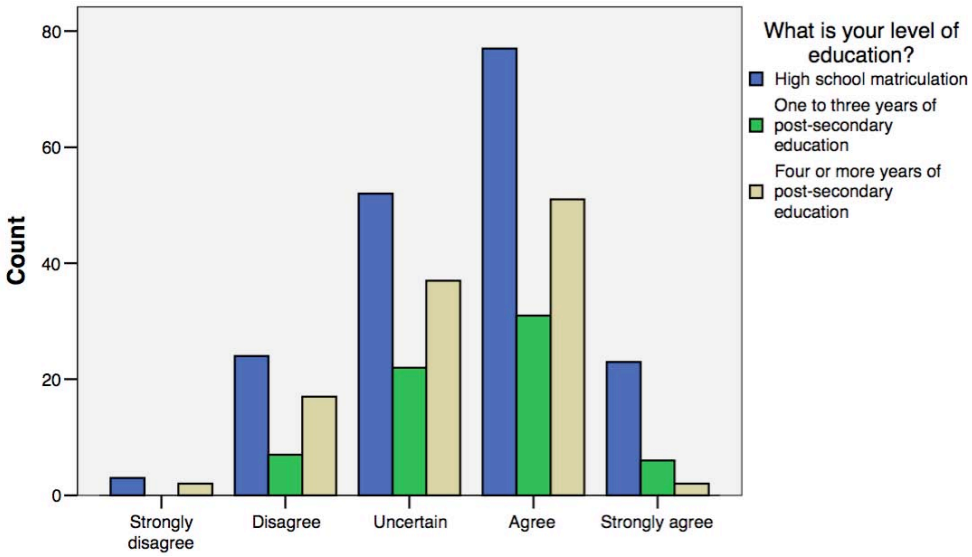

Abb. 16: IuK-Technologien werden vor allem eingesetzt, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen

Zu den festgestellten signifikanten Abhängigkeiten bezüglich des Bildungsabschlusses zählen die folgenden:

- Die gleiche Gruppe hat eine negativere Einstellung zu Frage 9: *Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen*.
- Eine größere Anzahl von Personen mit Hochschulabschluss ist fest davon überzeugt als andere, dass *IuK-Technologien vor allem eingesetzt werden, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen* (Frage 12, siehe auch Abb. 16).
- Diese Gruppe steht auch der Behauptung positiver gegenüber, dass *IuK-Technologien eingesetzt werden, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen* (Frage 13).

5.4 Einfluss des Berufs

Folgende Zusammenhänge wurden festgestellt:

- Manager und technische Mitarbeiter sowie in etwas geringerem Maße auch Studierende setzen in größerem Umfang *moderne technische Ausstattung in ihrem beruflichen Umfeld* ein als andere Gruppen (Frage 5).
- Studierende haben eine negativere Einstellung hinsichtlich der Aussage, dass *das Problem des Bildungszugangs für behinderte Studierende dank moderner Iuk-Technologie gelöst wurde* (Frage 7).
- Manager und Rentner haben bezüglich Frage 8 eine positivere Einstellung als Lehrende und Studierende (*Kontakte zwischen Studierenden und Lehrenden können bei der Online-Lehre von gleicher Intensität sein wie beim Präsenzstudium*).
- Manager und Lehrende stehen folgender These (Frage 9) positiver gegenüber als technische Mitarbeiter und Studierende: *Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen* (siehe auch Tabelle 6).

- Studierende haben hinsichtlich folgender These (Frage 10) eine positivere Einstellung als Manager: *Nur Optimisten glauben, dass die Auswirkungen der IuK-Technologien auf das Lernen von Vorteil sind*.
- dass *IuK-Technologien vor allem eingesetzt werden, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen* (Frage 12), wird von Lehrenden und Studierenden stärker unterstützt als von anderen Berufsgruppen.
- diese Gruppen stehen auch der Aussage von Frage 13 positiver gegenüber als andere Gruppen: *IuK-Technologien werden eingesetzt, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen*.
- Lehrende und Studierende glauben auch stärker als andere Berufsgruppen, dass *Lernspiele Studierende motivieren und dazu beitragen, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln* (Frage 16).
- Lehrende stehen folgender These (Frage 17) positiver gegenüber als Studierende: *Der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, hat das Fernstudiensystem verbessert*.
- Lehrende und Techniker haben eine positivere Meinung bezüglich Frage 18: *IuK-Technologien erleichtern den Zugang zu Studienmaterialien für Teilzeitstudierende*.
- die These (Frage 19), dass *Universitätsabschlüsse, die von Fernuniversitäten vergeben werden, mit den von Präsenzuniversitäten verliehenen vergleichbar sind*, wird von Lehrenden und Studierenden negativer beurteilt als von Rentnern.
- Studierende stehen der These (Frage 21) etwas pessimistischer gegenüber, dass *das Studium an einer Fernuniversität Vorteile besonders für Erwachsene hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen*.

Tabelle 6: Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen

			What is	
			Other (e.g. retired)	Total
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	Count	1	17
		Expected Count	2,5	17,0
	Disagree	Count	12	89
		Expected Count	13,3	89,0
	Uncertain	Count	7	77
		Expected Count	11,5	77,0
	Agree	Count	22	131
		Expected Count	19,6	131,0
	Strongly agree	Count	11	41
		Expected Count	6,1	41,0
Total		Count	53	355
		Expected Count	53,0	355,0

Abschlussbericht WP 3

6 BERECHNUNG VON SPEARMANS RHO

Um die lineare Beziehung zwischen verschiedenen Variablen zu bestimmen, haben wir auch den Rangkorrelationskoeffizienten von Spearman als nicht-parametrisches Maß für die Korrelation angewandt. Dieser Koeffizient ermöglicht es uns, zwei ordinale Variablen in Beziehung zueinander zu setzen.

Bei der Analyse haben wir diesen auf alle Fragen angewandt. Er ermittelt die Richtung des Zusammenhangs (positiv oder negativ) sowie seine Stärke. Die signifikanten Werte in der Tabelle in Anhang B.9 sind markiert. Die Stärke des Koeffizienten wird folgendermaßen ausgewertet (Muij, 2003, S. 145):

0. +/- 1	schwach
0. +/- 3	mäßig
0. +/- 5	moderat
0. +/- 8	stark
über 0. +/- 8	sehr stark

Die Richtung der Korrelation gibt an, ob sich die Werte beider Variablen erhöhen (positiv) oder ob sich einer erhöht, wenn der andere sich verringert (negativ).

Folgendes ist zu berücksichtigen: Die Tatsache, dass zwei Variablen in Beziehung zueinander stehen, bedeutet nicht unbedingt, dass die eine die Ursache der anderen ist. Ferner ist Spearmans Rho ein Rangkorrelationskoeffizient für ordinale Variablen. Dies bedeutet, dass wir uns bei der Verwendung der Begriffe „erhöhen/verringern“ oder „mehr/weniger“ nicht auf messbare „Mengen“, sondern nur auf eine höhere oder niedrigere Position in einer Rangfolge beziehen.

Die wichtigsten Ergebnisse der Analyse sind folgende:

Die Antworten auf Fragen zur *Auswirkung der IuK-Technologien auf das Lernen im Allgemeinen* (Fragen 7 bis 16) sind - sofern signifikant - positiv miteinander korreliert, bei den Fragen 11 bis 16 konnte gar für jede Fragenkombination mindestens eine positiv mäßige Korrelation signifikant nachgewiesen werden. Wer also in mindestens einer der Thesen eher positiv gegenüber des Einflusses der IuK-Technologie auf das Lernen eingestellt ist, wird auch bei den anderen Thesen in diese Richtung tendieren. Hervorzuheben sind hierbei folgende Korrelationen:

- Die Zustimmung zur Aussage *„Kontakte zwischen Studierenden und Lehrenden können bei der Online-Lehre von gleicher Intensität sein wie beim Präsenzstudium“* (Frage 8) steht in moderater positiver Korrelation mit der Zustimmung zu der These in Frage 9 *„Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen“* (rho = 0,454; Sig. = 0,000).
- Befragte, die *„aus ihrer persönlichen Erfahrung heraus finden, dass IuK-Technologien das Lernen bereichern“* (Frage 11), tendieren auch zur Aussage 15, dass *„die Integration von Lehrtexten und Bilder oder Animationen in multimediale Lernumgebungen das Lernen verstärkt“* (moderate positive Korrelation; rho = 0,327; Sig. = 0,000).
- Antworten auf die Aussagen, dass die *„IuK-Technologien eingesetzt werden, um Studierende zu motivieren, sich aktiv in den Lernprozess einzubringen“* (Frage 12), und dass die *„IuK-Technologien eingesetzt werden, um höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen“* (Frage 13), sind moderat positiv korreliert (rho = 0,396; Sig. = 0,000).

- Die These, dass „*die Integration von Lehrtexten und Bilder oder Animationen in multimediale Lernumgebungen das Lernen verstärkt*“ (Frage 15), ist moderat positiv mit der Aussage, dass „*Lernspiele motivieren, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln*“ (Frage 16) verbunden (rho = 0,317; Sig. = 0,000).

Auch zwischen den Antworten auf Fragen zur „*Auswirkung der IuK-Technologien auf das Lernen an Fernuniversitäten*“ (Fragen 17-21) kann - wenn signifikant nachweisbar - eine mindestens mäßig positive Korrelation nachgewiesen werden. Hierbei sind hervorzuheben:

- Die „*Vergleichbarkeit der Universitätsabschlüsse von Fernuniversitäten und Präsenzuniversitäten*“ (Frage 19) und der *fehlende Unterschied der Studienerfolge der Absolventen und Absolventinnen beider Formen* (Frage 20) stehen in starker positiver Korrelation zueinander, d.h., ein vergleichbarer Abschluss geht für die Befragten mit einem nicht unterscheidbaren Studienerfolg einher (rho = 0,614; Sig. = 0,000).
- Die Zustimmung zu der Aussage „*IuK-Technologien erleichtern den Zugang zu Studienmaterialien für Teilzeitstudierende*“ (Frage 18) steht in moderater positiver Korrelation zu der Zustimmung der These, dass „*der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, das Fernstudiensystem verbessert hat*“ (Frage 17) (rho = 0,443; Sig. = 0,000).
- Die Antworten zu den Aussagen, dass „*der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, das Fernstudiensystem verbessert hat*“ (Frage 17), dass *IuK-Technologien den Zugang zu Studienmaterialien für Teilzeitstudierende erleichtern* (Frage 18) und dass *Universitätsabschlüsse von Fernuniversitäten und Präsenzuniversitäten vergleichbar sind* (Frage 19) stehen jeweils in moderater positiver Korrelation zu Antworten zur These 21. Sie besagt, dass *das Studium an einer Fernuniversität Vorteile besonders für Erwachsene hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen* (rho = 0,358, rho = 0,336 bzw. rho = 0,328, je Sig. = 0,000).

Auch zwischen den beiden Fragegruppen zur *Auswirkung der IuK-Technologien auf das Lernen im Allgemeinen* (Fragen 7-16) und auf *deren Auswirkung auf das Lernen an Fernuniversitäten* (Fragen 17-21) konnten - wieder sofern signifikant - nur mindestens mäßig positive Korrelationen bei den Antworten nachgewiesen werden. Eine Ausnahme bildet jedoch die Korrelation zwischen den Aussagen, dass *Lernspiele motivieren, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln* (Frage 16) und dass *Universitätsabschlüsse von Fernuniversitäten und Präsenzuniversitäten vergleichbar sind* (Frage 19). Die Antworten auf diese beiden Aussagen sind die einzigen (signifikant mäßig) negativ korrelieren Aussagen zur Auswirkung der IuK-Technologien untereinander (rho = -0,120; Sig. = 0,029). Wer Lernspiele als motivierend empfindet, stimmt eher nicht der Vergleichbarkeit der Studienabschlüsse von Fernuniversität und Präsenzuniversität zu.

Zwischen den beiden genannten Fragegruppen hervorzuheben ist:

- Die Zustimmung zur Aussage „*Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen*“ (Frage 9) steht in moderater positiver Korrelation mit der Zustimmung zu der These 19, dass *die Universitätsabschlüsse von Fernuniversitäten und Präsenzuniversitäten vergleichbar sind* (rho = 0,314; Sig. = 0,000).

Mit Vorsicht sind Schlussfolgerungen zur Korrelation von Aussagen mit dem Alter der Befragten zu betrachten. Die Ergebnisse nach Spearman legen u.a. folgende Beobachtungen nahe:

- Die Altersgruppierung steht in mäßiger negativer Korrelation zur *Häufigkeit der Änderung von Arbeitsweisen auf Grund von technischen Entwicklungen* (Frage 6), d. h. für ältere Befragte wurde ein stärkerer Bedarf an Änderungen auf Grund von technischen Innovationen verzeichnet (rho = -0,221; Sig. = 0,000).
- Die Altersgruppierung steht in mäßiger negativer Korrelation zu der These, dass *IuK-Technologien eingesetzt werden, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen* (Frage 13), d. h. ältere Befragte stimmen dieser These eher zu (rho = -0,215; Sig. = 0,000).
- Die Altersgruppierung steht in mäßiger positiver Korrelation zu der These, dass U*niversitätsabschlüsse, die von Fernuniversitäten vergeben werden, mit den von Präsenzuniversitäten verliehenen vergleichbar sind*, d. h. jüngere Befragte stimmen dieser These eher zu (rho = -0,212; Sig. = 0,000).
- Die Altersgruppierung steht in mäßiger positiver Korrelation zu der These, dass *das Studium an einer Fernuniversität Vorteile besonders für Erwachsene hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen*, d. h., jüngere Befragte stimmen dieser These eher zu (rho = -0,203; Sig. = 0,000).

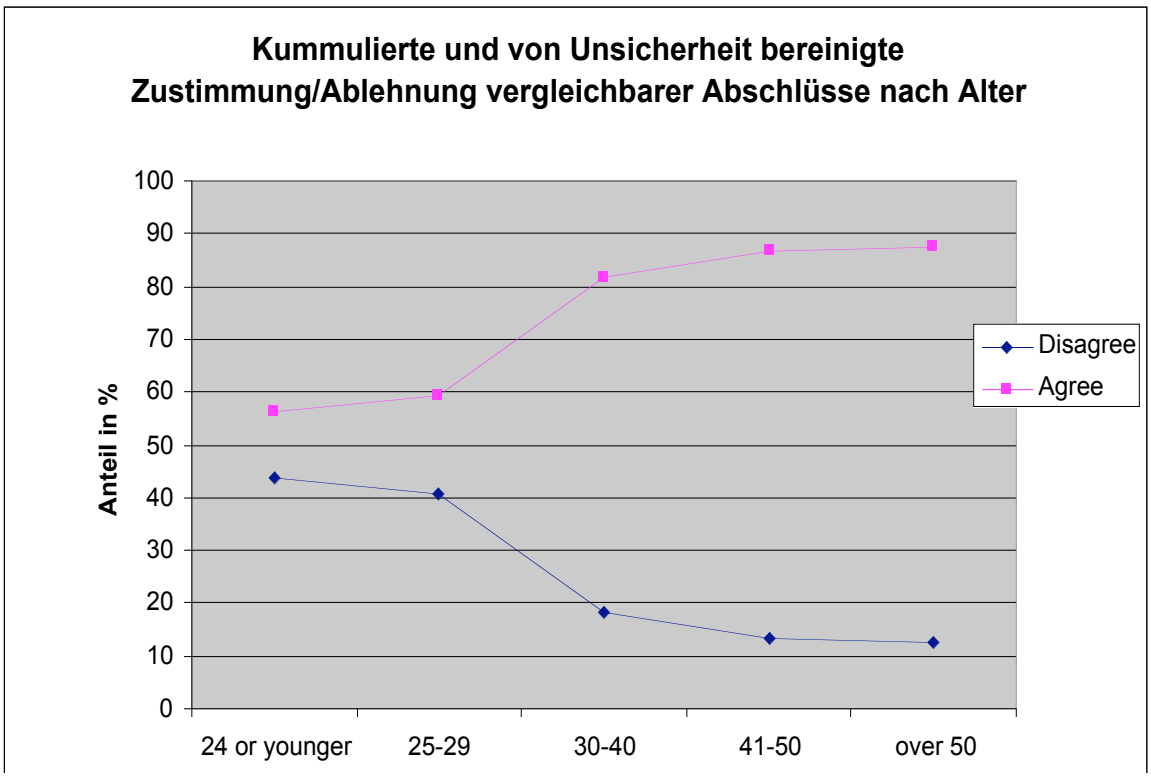

Abb. 17: Haltung zur Vergleichbarkeit der Abschlüsse an Fern- und Präsenzuniversitäten nach Altersgruppen

Betrachten wir die vorletzte Aussage, die in Abb. 17 visualisiert ist, im Detail:

Die Berechnung der Korrelation nach Spearman besagt, dass je jünger die Befragten sind, desto höher die Zustimmung zur These *„Abschlüsse von Fernuniversitäten und Präsenzuniversitäten sind vergleichbar“*, sein soll. Betrachtet man jedoch die relative Zustimmung oder Ablehnung der Vergleichbarkeit der Abschlüsse aufgeschlüsselt nach Alter unter Vernachlässigung der Weder-noch-Aussagen, so scheint genau die gegenteilige Aussage zuzutreffen. Dass die Korrelationsberechnung zu einem anderen Ergebnis kommt, ist ver-

mutlich auf den übermäßig hohen Anteil Befragter über 50 Jahren ohne Meinung zu dieser These zurückzuführen (über 50 % der gerade mal 17 Vertreter dieser Altersgruppe, während in den anderen Gruppen nur 22,4% - 32,8% sich ihrer Meinung enthielten).

Auch wenn die Berechnungen nach Spearman einige signifikante mäßige Korrelationen nahelegen, bleibt der Verdacht, dass diese übermäßig durch die Altersgruppe der Befragten über 50 Jahre beeinflusst sind und bei Verzicht auf diese Gruppe andere Beobachtungen möglich wären.

Eine detaillierte Datenanalyse dieses Tests wird in Anhang B.9 dargestellt.

7 HÄUFIGKEITEN

Berechnet wurde auch die Anzahl für jede Variable unter Berücksichtigung der Antworten aller Befragten.

Abbildung 17 zeigt die Häufigkeiten für Frage 5. Das vollständige Ergebnis wird in Anhang B.10 dargestellt, einschließlich der Zahlen, Prozentsätze und weiteren Balkendiagrammen.

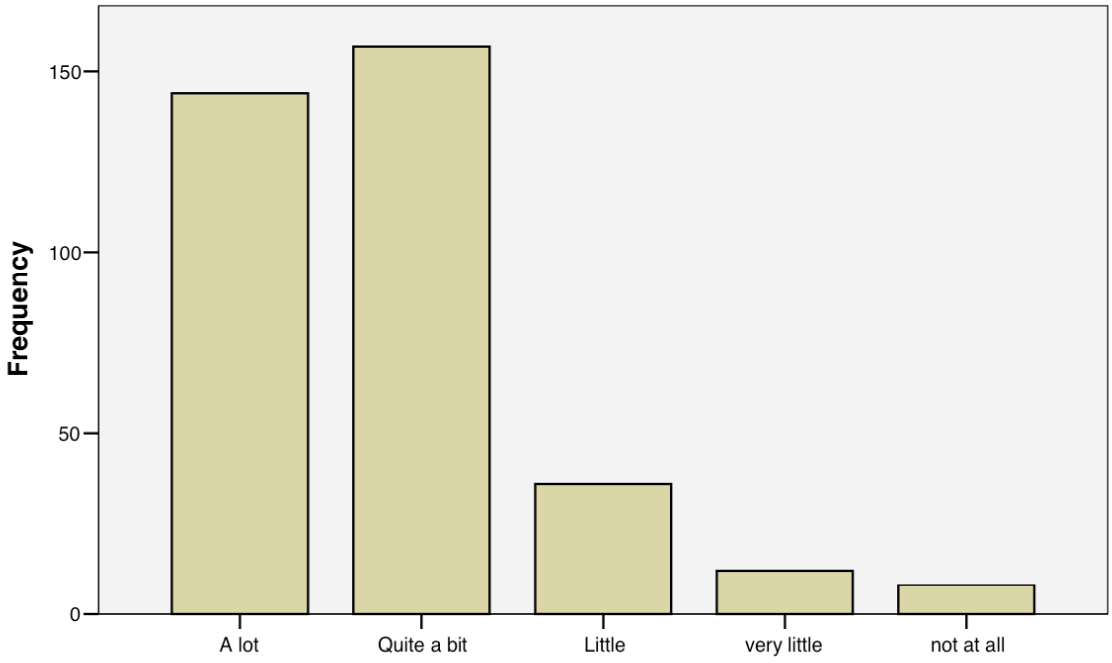

Abb. 18: In welchem Umfang haben Sie in Ihrem beruflichen Umfeld moderne technische Ausstattung eingesetzt?

Einige der Daten werden nachstehend zusammengefasst:

- Die meisten Teilnehmer (über 80 %) *setzen häufig moderne technische Ausstattung in ihrem beruflichen Umfeld ein*.
- Ein großer Prozentsatz der Befragten (über 70 %) musste *ihre Arbeitsweise auf Grund von technischen Entwicklungen ändern*.
- 50 % der Befragten glauben, dass *das Problem des Bildungszugangs für behinderte Studierende dank moderner Iuk-Technologie gelöst wurde*, während nur ein geringer Anteil (ca. 10 %) diese Meinung nicht teilt.
- Fast 60 % sind nicht der Meinung, dass *Kontakte zwischen Studierenden und Lehrenden bei der Online-Lehre von gleicher Intensität sein können wie beim Präsenzstudium*, aber nur 30 % stimmen dieser Aussage zu.
- Fast die Hälfte der Befragten ist der Meinung, dass *Online-Kommunikation einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen ermöglicht,* während ca. 30 % diese Ansicht nicht teilt.

- Fast 60 % teilen die negative Behauptung nicht, dass *nur Optimisten glauben, dass die Auswirkungen der IuK-Technologien auf das Lernen von Vorteil sind* und nur ca. 20 % stimmen dieser These zu.

- Ein großer Anteil der Befragten (fast 80 %) teilt die Ansicht, dass *IuK-Technologien nach ihrer persönlichen Studienerfahrung das Lernen bereichern*.

- Mehr als die Hälfte der Befragten ist der Ansicht, dass *IuK-Technologien vor allem eingesetzt werden, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen*, wobei nur ein kleiner Anteil (ca. 15 %) diese Ansicht nicht teilt.

- Mehr als 50 % sind der Ansicht, dass *IuK-Technologien eingesetzt werden, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen,* während nur ca. 20°% diese Ansicht nicht teilen.

- Auch hier sind über 50 % der Meinung, dass *IuK-Technologien eingesetzt werden, um individualisierte Lehrangebote bereit zu stellen, die auf die Bedürfnisse einzelner Studierender zugeschnitten sind*, ca. 20°% teilen diese Ansicht nicht.

- Die Mehrheit der Befragten (ca. 80 %) teilt die Ansicht, dass *Lernen verstärkt wird, wenn Lehrtexte und Bilder oder Animationen in eine multimediale Lernumgebung integriert sind*.

- Ca. 70 % sind der Ansicht, dass *Lernspiele Studierende motivieren und dazu beitragen, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln*.

- Die meisten Personen (ca. 75 %) sind der Ansicht, dass *der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, das Fernstudiensystem verbessert hat*.

- Fast alle Befragten (ca. 90 %) sind der Ansicht, dass *IuK-Technologien den Zugang zu Studienmaterialien für Teilzeitstudierende erleichtern*.

- Ca. 50 % stimmen der These zu, dass *Universitätsabschlüsse, die von Fernuniversitäten vergeben werden, mit den von Präsenzuniversitäten verliehenen vergleichbar sind;* 25 % der Befragten teilen diese Ansicht nicht.

- Zu folgender These gibt es keine Zustimmung: *Es gibt keinen Unterschied im Studienerfolg zwischen Absolventinnen und Absolventen von Fernuniversitäten und von Präsenzuniversitäten*.

- Dass *das Studium an einer Fernuniversität Vorteile besonders für Erwachsene hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen,* wird jedoch von einem überwältigenden Prozentsatz der Befragten (ca. 90 %) für zutreffend befunden.

8 VARIANZANALYSE (ANOVA)

Die Varianzanalyse (ANOVA) ermöglicht uns den Vergleich des Mittelwerts einer ordinalen Variablen (mit vielen Skalenpunkten) von verschiedenen Gruppen. Die Analyse wird durch einen Vergleich der Abweichung (Varianz) des Gruppenmittelwerts mit der Abweichung der Werte innerhalb der Gruppen vorgenommen.

In ANOVA können wir eine oder mehrere unabhängige Variablen verwenden, aber diese müssen alle nominal oder ordinal sein. Wenn die unabhängigen Variablen mehr als fünf Kategorien umfassen, verliert ANOVA schnell die Fähigkeit, zwischen ihnen zu unterscheiden.

ANOVA verwendet einen Test (den F-Test), um zu ermitteln, ob wesentliche Unterschiede zwischen den Mittelwerten der Gruppen bestehen. Ein Schwellenwert von <0,05 wird als Richtlinie verwendet, um zu bestimmen, ob die Beziehung signifikant ist oder nicht. Der F-Test ist ein globaler Test. Dies bedeutet, dass wir, wenn wir einen signifikanten Unterschied (p-Wert <0,05) finden, nur wissen, dass es irgendwo zwischen den Gruppen einen signifikanten Unterschied gibt (Muijs, 2003, Seiten 185-200).

Wir haben hier den Scheffe-Test angewandt, um signifikante Unterschiede bei den Vergleichen zu ermitteln. Ein Signifikanzniveau (p-Wert) wird für jeden Test berechnet. In dem Dokument in Anhang B.11 haben wir beispielsweise einen signifikanten p-Wert aus dem F-Test für die Frage „*Kontakte zwischen Studierenden und Lehrenden können bei der Online-Lehre von gleicher Intensität sein wie beim Präsenzstudium*“ (Wert 0,015 < 0,05). Dies bedeutet, dass es irgendwo einen signifikanten Unterschied zwischen den Gruppen gibt. Wie wir den Post Hoc Tests entnehmen können, haben wir in der Reihe derselben Frage in der Spalte „Sig.“ einen p-Wert von 0,036; dies bedeutet, dass dieser äußerst signifikant ist. Daher ist es wahrscheinlich, dass die zugehörige Altersgruppe (41-50) sich wesentlich von der Altersgruppe 25-29 unterscheidet.

Ein weiteres, signifikanteres Beispiel könnte sich auf folgende Frage beziehen: *IuK-Technologien können eingesetzt werden, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen*: Hier unterscheidet sich die Altersgruppe 24 und jünger signifikant von allen anderen Gruppen.

In den Anhängen B.11-B13 werden die Ergebnisse des ANOVA-Tests dargestellt, die auf die Variablen Alter, Bildung und Beruf angewandt wurden.

9. SCHLUSSFOLGERUNGEN

Es wird allgemein anerkannt, dass der Einsatz von Technologien in der Hochschulbildung vorteilhaft für die Studierenden allgemein und für besondere Belange einzelner Studierenden ist. Zwischen Menschen mit oder ohne Erfahrung eines Studiums an einer Fernuniversität gibt es keinen signifikanten Unterschied in der Beurteilung der Tatsache, dass der Technologieeinsatz im Fernstudium verschiedene Nachteile dieses Studienmodells bewältigen kann, unter anderem verhinderte Interaktion zwischen Lehrenden und Studierenden, indirekte Kommunikation oder verminderte Möglichkeiten der sozialen Interaktion. Die meisten Teilnehmer bestätigen, dass IuK-Technologien einen erleichterten Zugang zu Studienmaterialien für Teilzeitstudierende ermöglichen (90 %), und dass IuK-Anwendungen, die das Lernen und Lehren sowie den Internetzugang zu administrativen Prozessen fördern, die für Studierende von Belang sind, das Fernstudium verbessert haben (75 %). Multimediale Umgebungen werden als sehr vorteilhaft für das Lehren und Lernen an Fernuniversitäten angesehen. 80 % der Befragten stimmen zu, dass das Lernen verstärkt wird, wenn Lehrtexte und Bilder in eine multimediale Umgebung integriert sind. Im Gegensatz dazu stimmen nur 50 % der Teilnehmer – dies entspricht jedoch nach wie vor der Mehrheit – der These zu, dass IuK-Technologien genutzt wurden, um individualisierte Lehrangebote bereit zu stellen.

Unsere Hypothese, dass es *allgemein anerkannt wird, dass das Studium, das von Fernuniversitäten angeboten wird, mit dem der Präsenzuniversitäten vergleichbar ist, und dass die Hochschulabschlüsse der Fernuniversitäten die gleiche Anerkennung finden wie die der traditionellen Präsenzuniversitäten*, wurde nicht endgültig bestätigt. Während die meisten Teilnehmer (90 %) glauben, dass ein Studium an einer Fernuniversität besonders für Erwachsene Vorteile hat, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen, wird die Qualität des Studiums in diesen Einrichtungen nicht hoch anerkannt. Unter den Teilnehmern wurde kein Einvernehmen darüber erreicht, ob es einen Unterschied in den Studienerfolgen zwischen dem Studieren an einer Fernuniversität und an einer traditionellen Präsenzuniversität gibt. Während eine kleine Minderheit der Teilnehmer die Behauptung unterstützt, dass Hochschulabschlüsse, die von Fernuniversitäten vergeben werden, vergleichbar mit Abschlüssen von traditionellen Präsenzuniversitäten sind, ist es wichtig zu erwähnen, dass die negativen Beurteilungen hauptsächlich von Lehrenden und Studierenden geäußert wurden. Besonders Teilnehmer unter 30 haben eine negativere Einstellung, im Gegensatz zu Teilnehmern in der Altersklasse 30-50. Weitere Untersuchungen müssten angestellt werden, um zu ermitteln, ob dies von der persönlichen Erfahrung abhängt, da jüngere Menschen eher dazu neigen, traditionelle Universitäten zu besuchen. In jedem Fall scheinen Fernuniversitäten ein Vermarktungsproblem im Hinblick auf die Qualität der Universitätsabschlüsse zu haben, die sie verleihen.

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ANHÄNGE

A Der in Arbeitspaket 3 (WP3) benutzte Fragebogen

Der ursprünglich auf Englisch entwickelte Fragebogen "***Impact of technology on learning in Open Universities, distance education systems both academic and corporate***" wurde in die verschiedenen Sprachen der am Projekt beteiligten Institutionen übersetzt.

A.1 Englisches Original

Personal background

1. What is your occupation?

   Manager
   Technical
   Teacher or trainer
   Student
   Unemployed

2. What is your age grouping?

   24 or younger
   25-29
   30-40
   41-50
   over 50

3. Gender?

   Male
   Female

4. What is your level of education?

   High school matriculation
   One to three years of post-secondary education
   Four or more years of post-secondary education

5. To what extent have you used advanced technological equipment in your professional life?

   A lot
   Quite a bit
   Little
   Very little
   Not at all

6. Have you had to change your way of working because of technological developments?

   Yes. More than once
   Yes. Once

No

Questions on the impact of information and communications technologies (ICT) on learning in general

7. Thanks to technology, the problems of access to learning for students with disabilities have been resolved

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

8. Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

9. Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

10. Only optimistic people think that the impact of technology on learning is beneficial

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

11. From my personal study experience I find that the impact of technology on learning is valuable

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

12. Information and communications technology has usually been used to encourage us to be active participants in learning

Strongly agree
Agree
Uncertain
Disagree

Strongly disagree

13. Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

14. Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

15. Learning is enhanced when text and pictures are integrated in a multimedia environment

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

16 Educational games motivate learners and contribute to developing skills such as teamwork

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

Questions on the impact of information and communications technologies (ICT) on learning in Open Universities

17. The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

18. Technology facilitates easier access to material for those studying part-time

Strongly agree

Agree
Uncertain
Disagree
Strongly disagree

19. University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

20. There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

21. Study at an Open University is especially of advantage to adults who have work and family obligations

Strongly agree
Agree
Uncertain
Disagree
Strongly disagree

A.2 Deutsche Fassung

Der Fragebogen der Hauptuntersuchungsgruppe wurde im Web zugänglich gemacht.

A.2.1 E-Mail an die Studierenden der FernUniversität

Im Auftrag von Prof. Krämer verschickte das Studierendensekretariat am 7. Mai 2007 nachstehende E-Mail an 1500 Studierende der FernUniversität.

Von: "Studierendensekretariat" <Studierendensekretariat@FernUni-Hagen.de>
Betreff: **Befragung zu den Auswirkungen des Einsatzes Neuer Medien und der IuK-Technik auf das Fernstudium**
Datum: 7. Mai 2007 15:06:01 Uhr MESZ
An: <stud-info@FernUni-Hagen.de>
Antwort an: <Bernd.Kraemer@FernUni-Hagen.de>

Liebe Fernstudierende,

im Rahmen eines zweijährigen EU-Projekts erforschen wir europaweit aus verschiedenen Perspektiven die Auswirkungen des Einsatzes Neuer Medien und der IuK-Technik auf das Studium an Hochschulen. Die erste Befragung untersucht das Thema aus der Perspektive von Fernstudierenden. Studierende von Präsenzuniversitäten in Bulgarien, Irland, Italien und Ungarn sind als Kontrollgruppen ebenfalls an der Befragung beteiligt.

Der Online-Fragebogen wird bis Ende Mai 2007 für Sie unter der URL

https://eva.fernuni-hagen.de/mrIWeb/mrIWeb.dll?I.Project=dvtprojekt

bereitgehalten. Ich möchte Sie herzlich bitten, den Fragebogen mit 21 Fragen auszufüllen. Sie müssen dafür etwa 10 Minuten Zeit einplanen. Um Ihr Engagement noch etwas zu beflügeln, werden unter den Teilnehmerinnen und Teilnehmern fünf amüsante Zukunftsromane des international bekannten Informatikers Prof. Hermann Maurer verlost. Wenn Sie an der Verlosung teilnehmen möchten, müssen Sie über den Fragebogen Ihre E-Mailadresse hinterlegen.

Die Ergebnisse werden nach Abschluss der europaweiten Befragung wissenschaftlich ausgewertet und in englischer Sprache bis spätestens Ende September 2007 veröffentlicht. Einen Hinweis auf die Veröffentlichung des Berichts und einem Verweis auf die PDF-Quelle können Sie dann auf der Webseite meines Lehrgebiets in der Rubrik „Aktuelles" und auch auf der Startseite finden:

http://www.dvt.fernuni-hagen.de/

Die Befragung wird freundlicherweise von der Stabsstelle für Evaluation und Qualitätssicherung der FernUniversität durchgeführt. Sie können versichert sein, dass die Vertraulichkeit Ihrer Angaben uneingeschränkt gewahrt wird und die Daten anonym bleiben. Bei Rückfragen zur Befragung wenden Sie sich bitte an den Projektleiter, Prof. Dr.-Ing. Bernd Krämer (Tel. ++49-(0)2331-987-371, E-Mail: bernd.kraemer@fernuni-hagen.de).

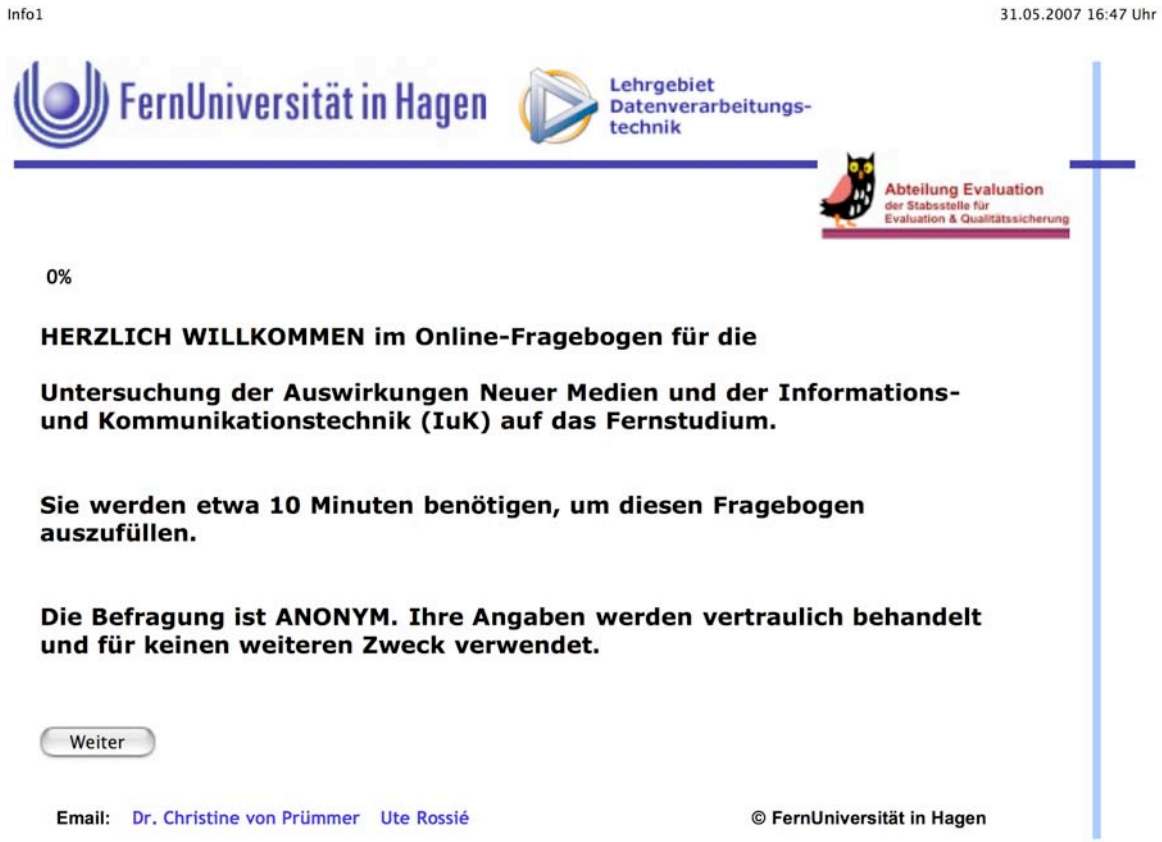
Mit freundlichen Grüßen

Prof. Dr. Bernd Krämer
(Lehrgebiet Datenverarbeitungstechnik, Fakultät für Mathematik und Informatik)

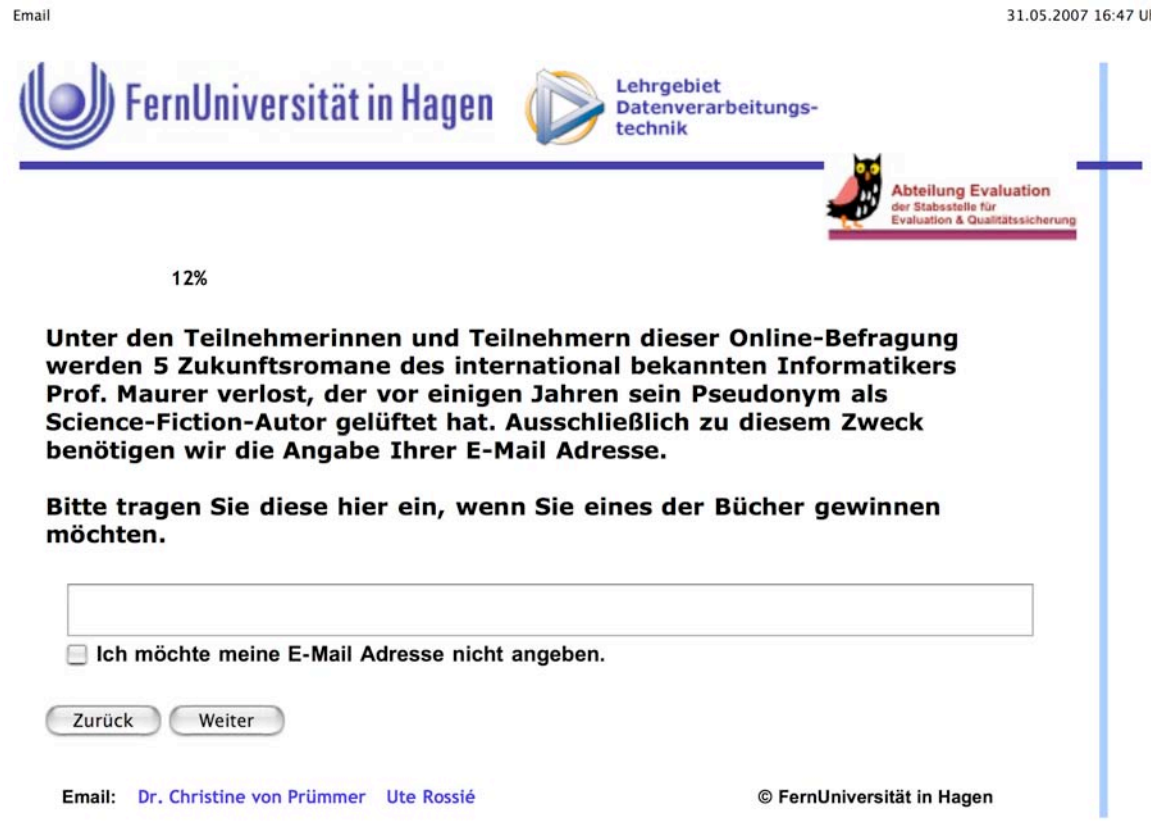
Antworten bitte an die Reply-To-Adresse.
Nachrichten an stud-info@fernuni-hagen.de werden nicht gelesen.

A.2.2 Der Fragebogen im Web

Die Willkommenseite des deutschen Fragebogens.

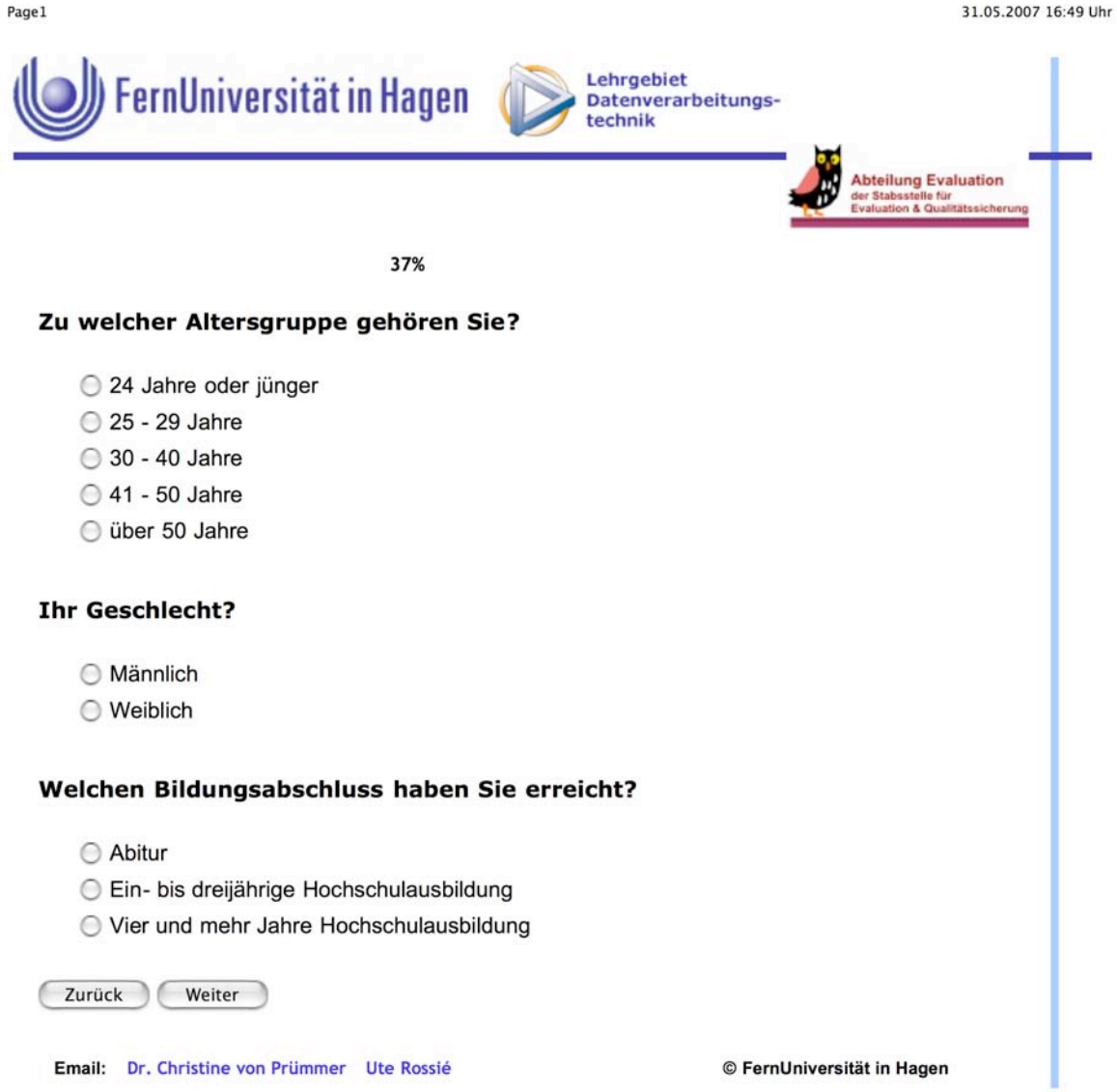


Ankündigung einer Verlosung auf der nächsten Seite des Fragebogens.



Seite 3 des Fragebogens

Fragen 2, 3 und 4 erscheinen af der nächsten Seite des Fragebogens.



Die folgende Seite des Fragebogens.

Die Tabelle auf der nächsten Seite des Fragebogens enthält alle Fragen, die sich mit den Auswirkungen der IuK-Technik auf das Lernen im Allgemeinen beziehen.

Quest07 31.05.2007 16:51 Uhr

FernUniversität in Hagen — Lehrgebiet Datenverarbeitungstechnik

Abteilung Evaluation der Stabsstelle für Evaluation & Qualitätssicherung

62%

FRAGEN zu Auswirkungen der Informations- und Kommunikationstechnik (IuK) auf das LERNEN IM ALLGEMEINEN:

Bitte äußern Sie Ihre Meinung in jeder Zeile, indem Sie auf einer Skala von 1 bis 5 das jeweils Zutreffende anklicken.
Dabei bedeutet 1 = stimme voll und ganz zu; 2 = stimme weitgehend zu; 3 = weder-noch; 4 = stimme eher nicht zu; 5 = bin gänzlich anderer Meinung.

	1	2	3	4	5
Dank moderner IuK-Technologie ist das Problem des Bildungszugangs für behinderte Studierende gelöst.	○	◉	○	○	○
Kontakte zwischen Studierenden und Lehrenden können bei der Online-Lehre von gleicher Intensität sein wie beim Präsenzstudium.	○	○	○	◉	○
Online-Kommunikation ermöglicht einen höheren Grad an Informationsaustausch zwischen Studierenden und Lehrenden als andere Lehr- und Lernformen.	○	◉	○	○	○
Nur Optimisten glauben, dass die Auswirkungen der IuK-Technologien auf das Lernen von Vorteil sind.	○	○	○	○	◉
Aus meiner persönlichen Studienerfahrung heraus finde ich, dass IuK-Technologien das Lernen bereichern.	◉	○	○	○	○
IuK-Technologien werden vor allem eingesetzt, um Studierende zu ermutigen, sich aktiv in den Lernprozess einzubringen.	○	◉	○	○	○
IuK-Technologien werden eingesetzt, um kognitiv höherwertige Lernprozesse wie Synthese- und Problemlösungsfähigkeiten zu unterstützen.	◉	○	○	○	○
IuK-Technologien werden eingesetzt, um individualisierte Lehrangebote bereit zu stellen, die auf die Bedürfnisse einzelner Studierender zugeschnitten sind.	○	◉	○	○	○
Lernen wird verstärkt, wenn Lehrtexte und Bilder oder Animationen in eine multimediale Lernumgebung integriert sind.	◉	○	○	○	○
Lernspiele motivieren Studierende und tragen dazu bei, soziale Fähigkeiten wie Gruppenarbeit zu entwickeln.	◉	○	○	○	○

Zurück Weiter

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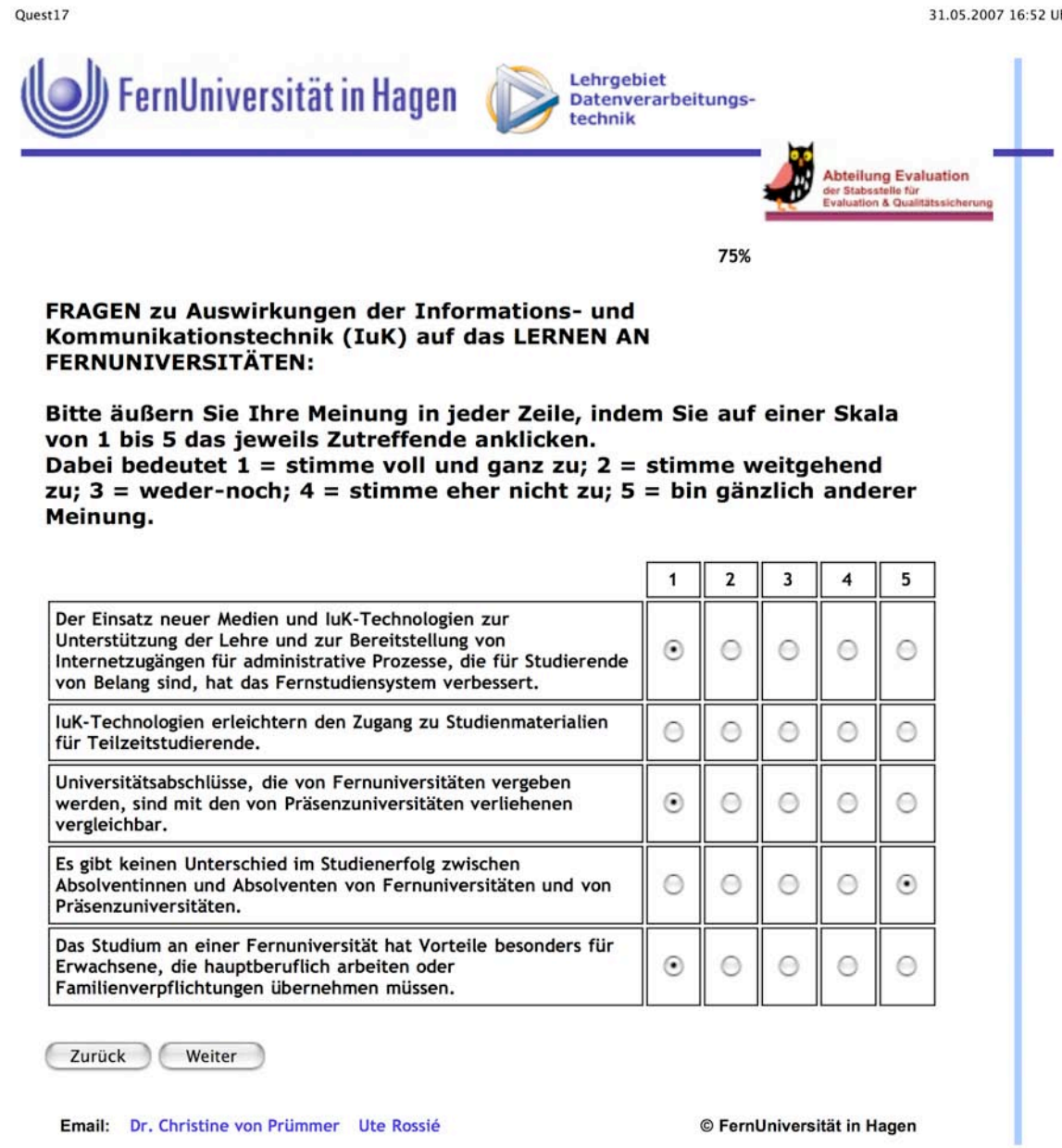
Die nachstehende Tabelle umfasst alle Fragen zu Auswirkungen der IuK-Technik auf das Lernen an Fernuniversitäten.



Quest17 31.05.2007 16:52 Uhr

FernUniversität in Hagen

Lehrgebiet Datenverarbeitungs-technik

Abteilung Evaluation der Stabsstelle für Evaluation & Qualitätssicherung

75%

FRAGEN zu Auswirkungen der Informations- und Kommunikationstechnik (IuK) auf das LERNEN AN FERNUNIVERSITÄTEN:

Bitte äußern Sie Ihre Meinung in jeder Zeile, indem Sie auf einer Skala von 1 bis 5 das jeweils Zutreffende anklicken.
Dabei bedeutet 1 = stimme voll und ganz zu; 2 = stimme weitgehend zu; 3 = weder-noch; 4 = stimme eher nicht zu; 5 = bin gänzlich anderer Meinung.

	1	2	3	4	5
Der Einsatz neuer Medien und IuK-Technologien zur Unterstützung der Lehre und zur Bereitstellung von Internetzugängen für administrative Prozesse, die für Studierende von Belang sind, hat das Fernstudiensystem verbessert.	◉	○	○	○	○
IuK-Technologien erleichtern den Zugang zu Studienmaterialien für Teilzeitstudierende.	○	○	○	○	○
Universitätsabschlüsse, die von Fernuniversitäten vergeben werden, sind mit den von Präsenzuniversitäten verliehenen vergleichbar.	◉	○	○	○	○
Es gibt keinen Unterschied im Studienerfolg zwischen Absolventinnen und Absolventen von Fernuniversitäten und von Präsenzuniversitäten.	○	○	○	○	◉
Das Studium an einer Fernuniversität hat Vorteile besonders für Erwachsene, die hauptberuflich arbeiten oder Familienverpflichtungen übernehmen müssen.	◉	○	○	○	○

Zurück Weiter

Email: Dr. Christine von Prümmer Ute Rossié

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Die letzte Seite des Fragebogens.

Info3
31.05.2007 16:52 Uhr
FernUniversität in Hagen
Lehrgebiet Datenverarbeitungs-technik
Abteilung Evaluation
der Stabsstelle für Evaluation & Qualitätssicherung
100%
Hiermit sind Sie am Ende der Befragung angelangt.
WIR DANKEN IHNEN HERZLICH FÜR IHRE MITARBEIT !
Falls Sie an den Ergebnissen des Projektes interessiert sind:
Spätestens Ende September wird Herr Professor Krämer einen ausführlichen Bericht ins Netz stellen.
Sie können dann auf seiner website "www.dvt.fernuni-hagen.de" einen link auf diesen Bericht finden.
Die Verlosung der Zukunftsromane findet unmittelbar nach Abschluss der Befragung Anfang Juni statt.
Die Gewinnerinnen und Gewinner werden per E-Mail benachrichtigt.
Zurück
Weiter
Email: Dr. Christine von Prümmer Ute Rossié
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https://eva.fernuni-hagen.de/mrlWeb/mrlWeb.dll
Seite 1 von 1

Abschlussbericht WP 3

B. BESCHREIBENDE ANALYSE DER GRUPPEN UND IHRE VARIATION

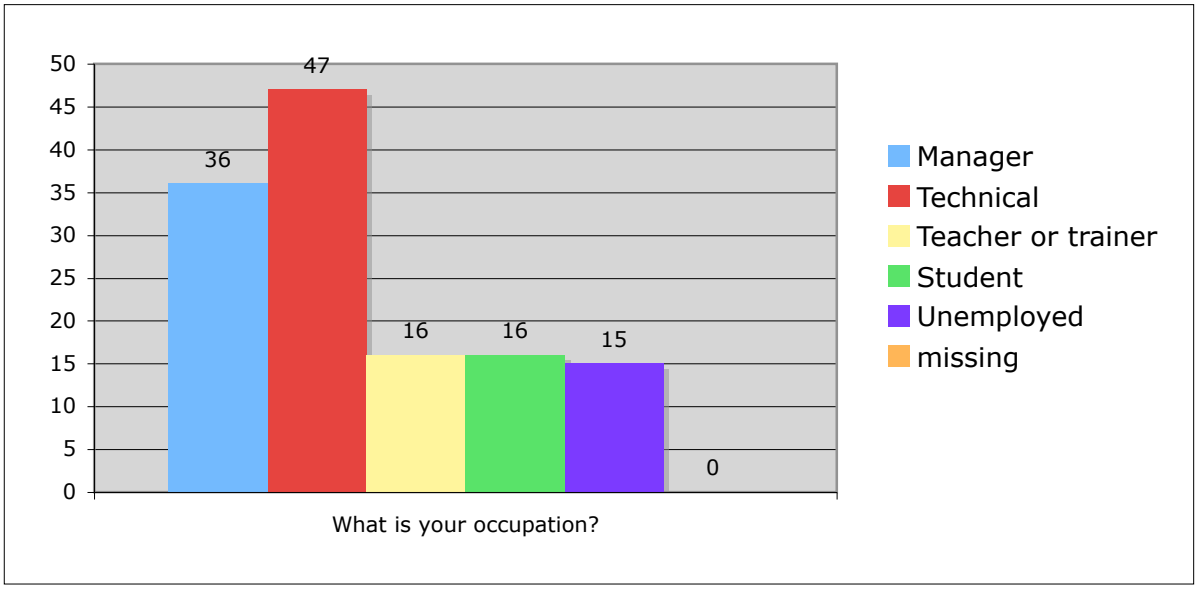
Die Tabellen und Diagramme in den folgenden beiden Anhängen fassen die beschreibende Analyse der Daten, die von 183 Antworten aus der Hauptuntersuchungsgruppe und 176 Personen in den fünf Kontrollgruppen erhoben wurden, zusammen.

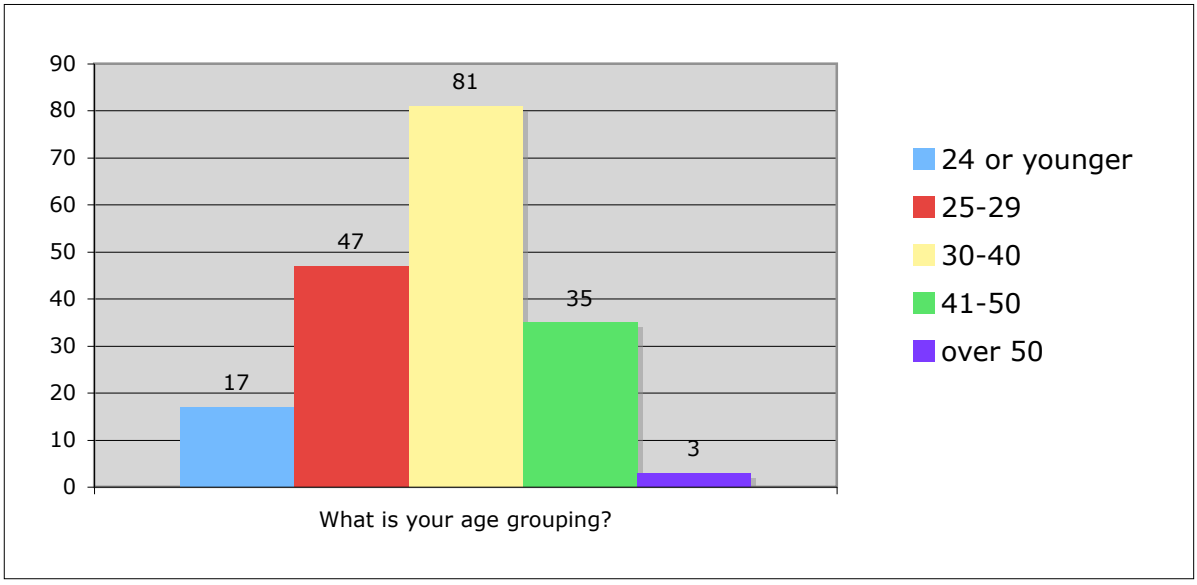
B.1 Beschreibende Analyse der Hauptuntersuchungsgruppe

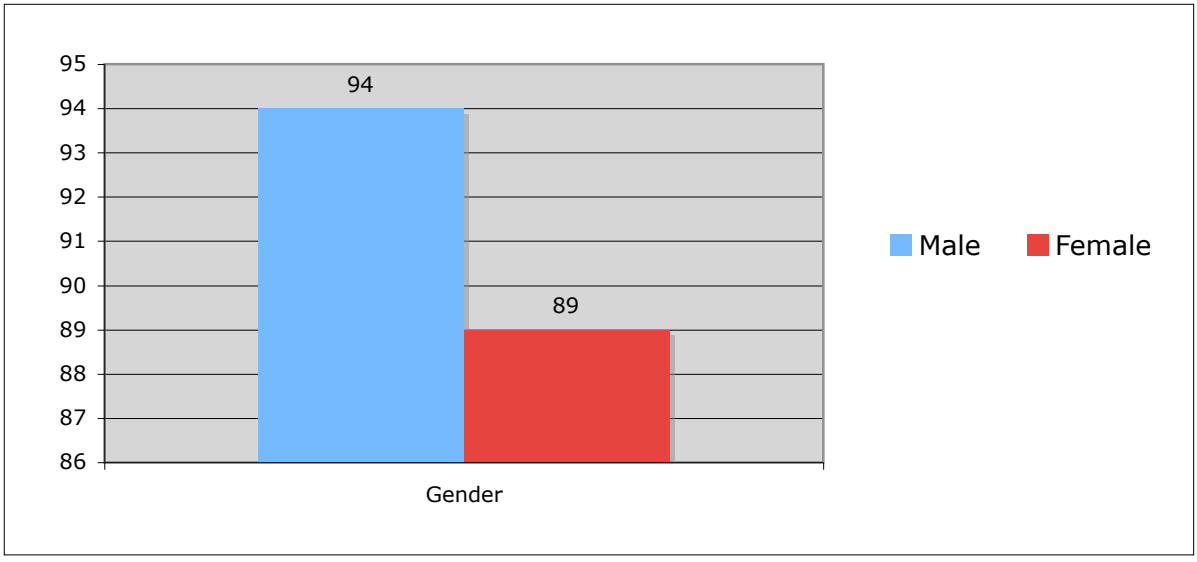
Personal Background

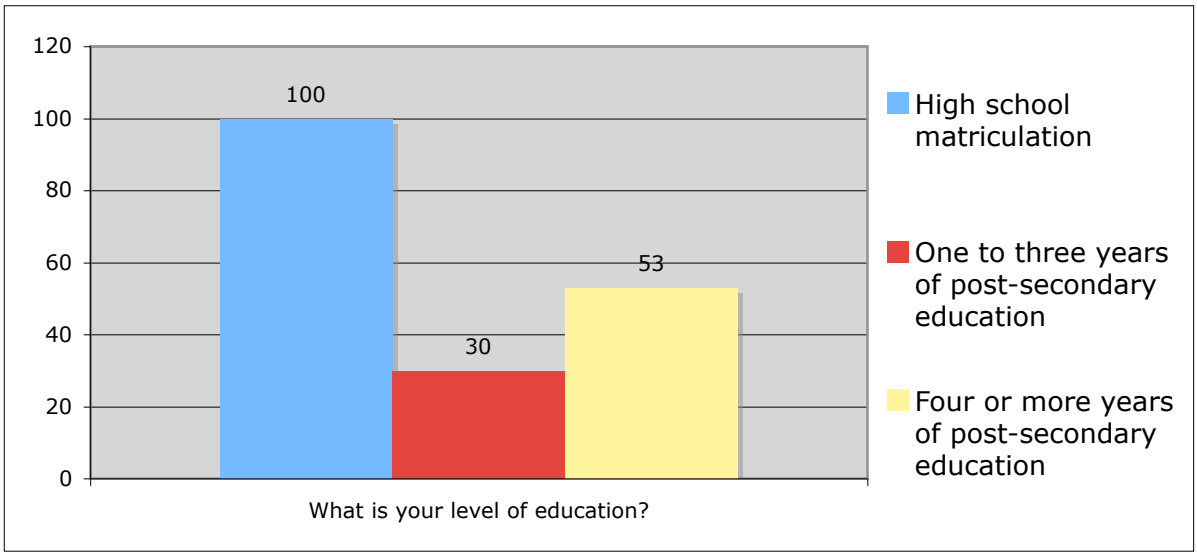
1	**What is your occupation?**	
	Manager	36
	Technical	47
	Teacher or trainer	16
	Student	16
	Unemployed	15
	missing	0
		130
2	**What is your age grouping?**	
	24 or younger	17
	25-29	47
	30-40	81
	41-50	35
	over 50	3
	missing	0
		183
3	**Gender**	
	Male	94
	Female	89
	missing	0
		183
4	**What is your level of education?**	
	High school matriculation	100
	One to three years of post-secondary education	30
	Four or more years of post-secondary education	53
	missing	0
		183
5	**To what extent have you used advanced technological equipment in your professional life?**	
	A lot	74
	Quite a bit	89
	Little	12
	Very little	4
	Not at all	4
	missing	0
		183
6	**Have you had to change your way of working because of technological developments?**	
	Yes. More than once	131
	Yes. Once	12
	No	40
	missing	0
		183

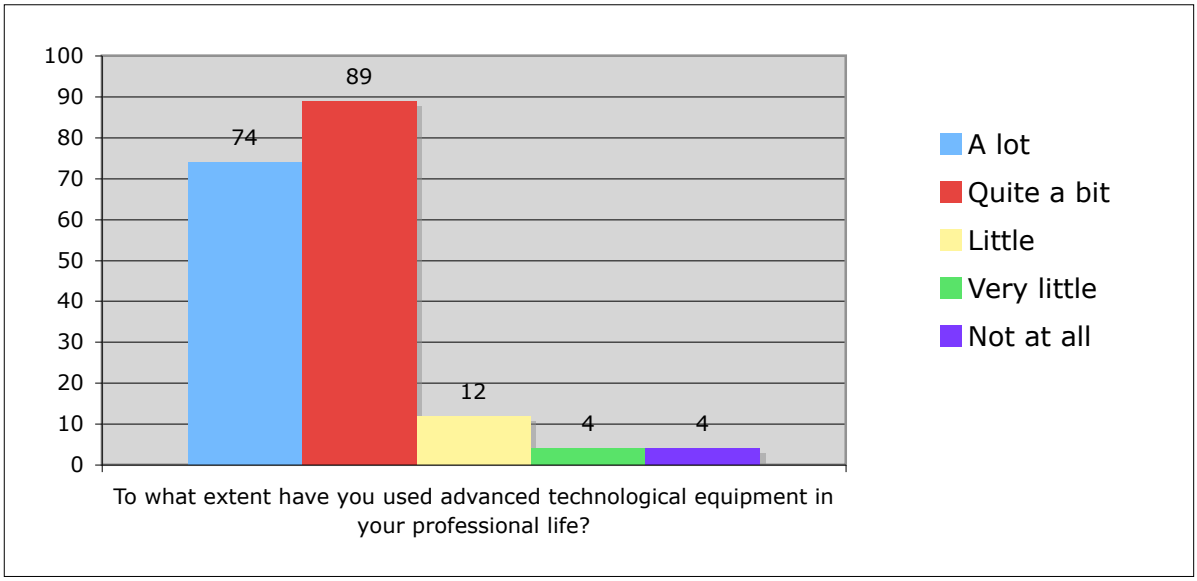
Personal Background

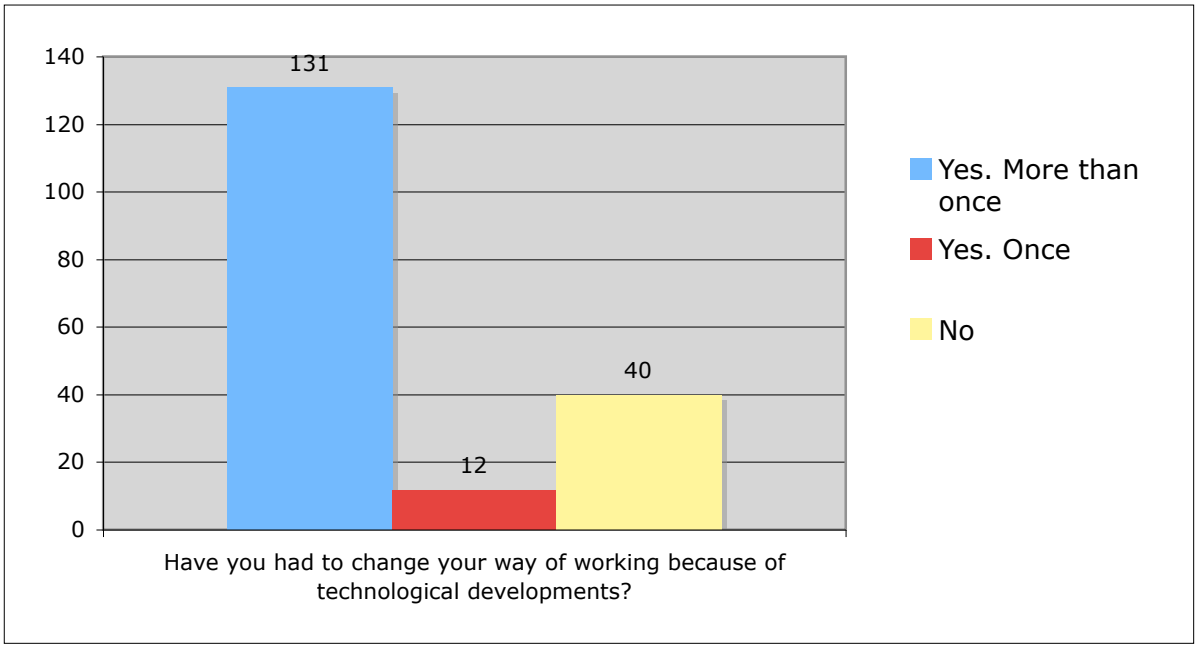







120
100
80
60
40
20
0
100
30
53
High school matriculation
One to three years of post-secondary education
Four or more years of post-secondary education
What is your level of education?


100
90
80
70
60
50
40
30
20
10
0
74
89
12
4
4
A lot
Quite a bit
Little
Very little
Not at all
To what extent have you used advanced technological equipment in your professional life?

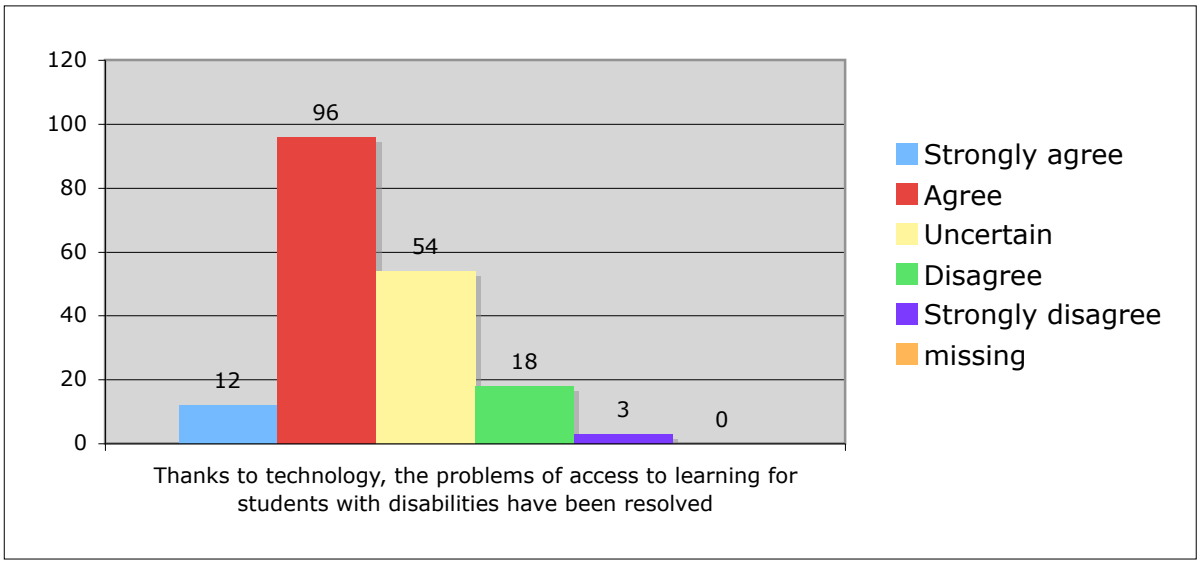

140
120
100
80
60
40
20
0
131
12
40
Yes. More than once
Yes. Once
No
Have you had to change your way of working because of technological developments?

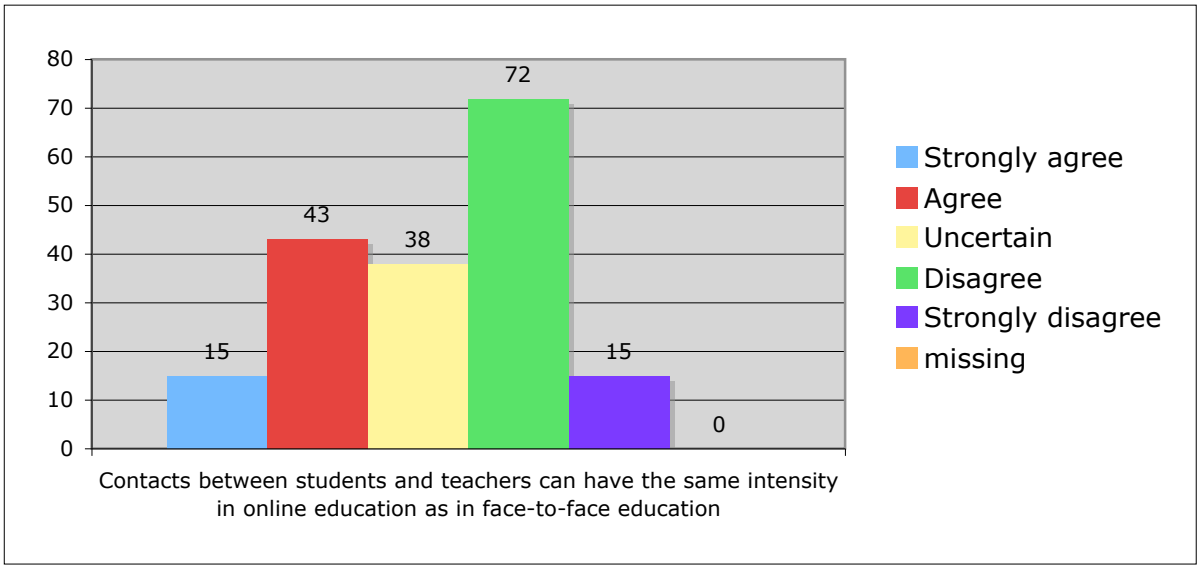
Questions on the impact of information and communications technologies (ICT) on learning in general

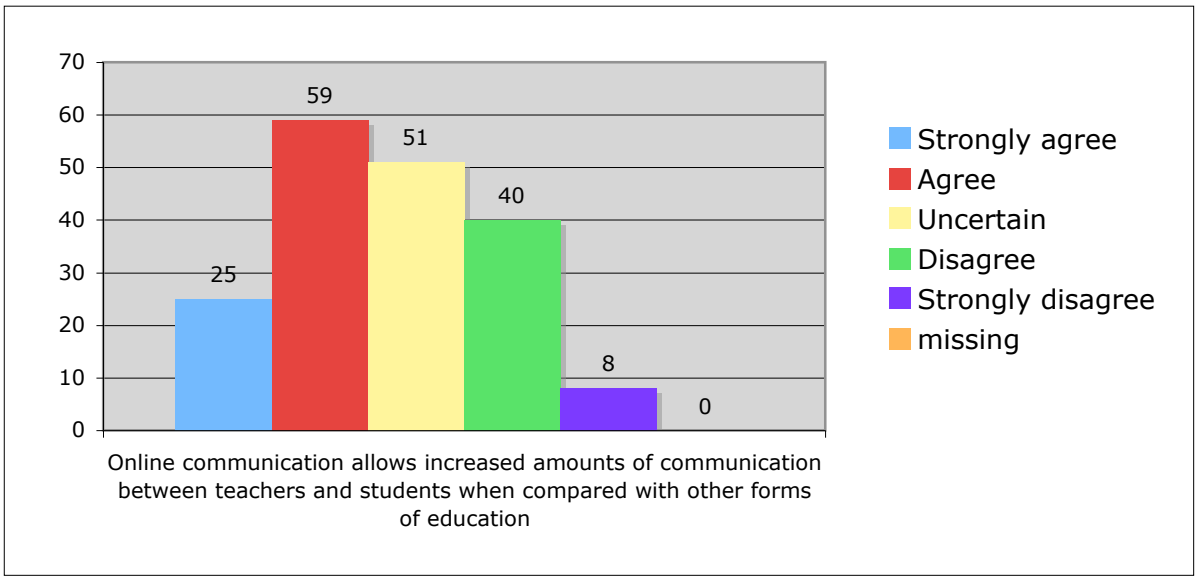
7	**Thanks to technology, the problems of access to learning for students with disabilities have been resolved**	
	Strongly agree	12
	Agree	96
	Uncertain	54
	Disagree	18
	Strongly disagree	3
	missing	0
		183
8	**Contacts between students and teachers can have the same intensity in online education as in face-to-face education**	
	Strongly agree	15
	Agree	43
	Uncertain	38
	Disagree	72
	Strongly disagree	15
	missing	0
		183
9	**Online communication allows increased amounts of communication between teachers and students when compared with other forms of education**	
	Strongly agree	25
	Agree	59
	Uncertain	51
	Disagree	40
	Strongly disagree	8
	missing	0
		183
10	**Only optimistic people think that the impact of technology on learning is beneficial**	
	Strongly agree	5
	Agree	20
	Uncertain	38
	Disagree	78
	Strongly disagree	42
	missing	0
		183
11	**From my personal study experience I find that the impact of technology on learning is valuable**	
	Strongly agree	62
	Agree	88
	Uncertain	27
	Disagree	5
	Strongly disagree	1
	missing	0
		183

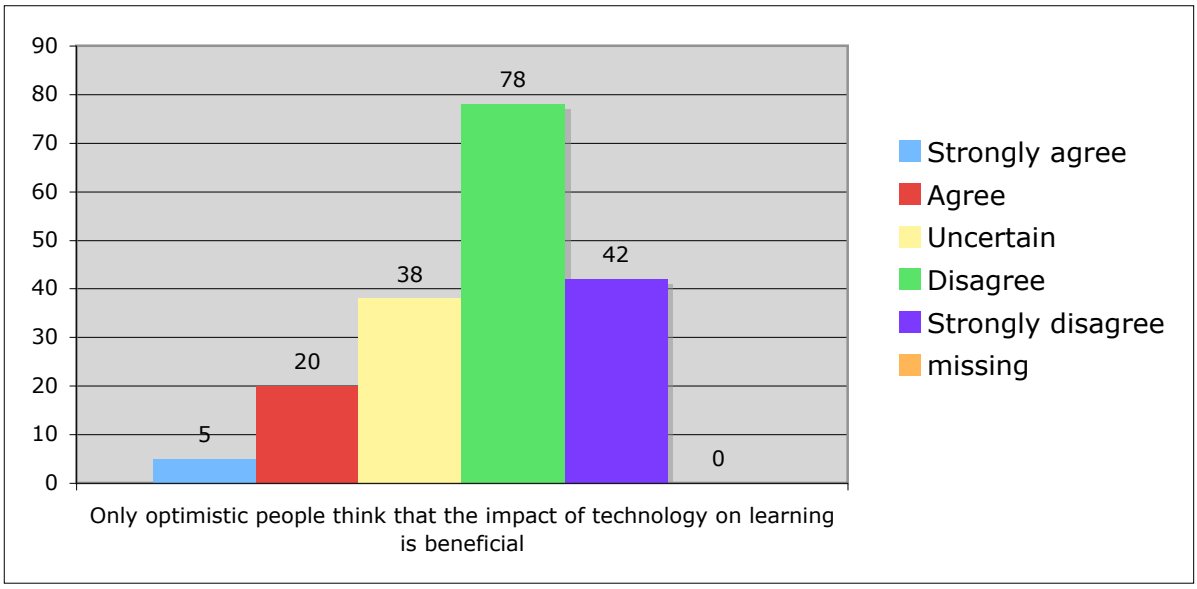
12	**Information and communications technology has usually been used to encourage us to be active participants in learning**	
	Strongly agree	14
	Agree	80
	Uncertain	64
	Disagree	22
	Strongly disagree	3
	missing	0
		183
13	**Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving**	
	Strongly agree	10
	Agree	79
	Uncertain	67
	Disagree	20
	Strongly disagree	7
	missing	0
		183
14	**Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs**	
	Strongly agree	17
	Agree	73
	Uncertain	57
	Disagree	32
	Strongly disagree	4
	missing	0
		183
15	**Learning is enhanced when text and pictures are integrated in a multimedia environment**	
	Strongly agree	64
	Agree	78
	Uncertain	28
	Disagree	12
	Strongly disagree	1
	missing	0
		183
16	**Educational games motivate learners and contribute to developing skills such as teamwork**	
	Strongly agree	25
	Agree	73
	Uncertain	52
	Disagree	28
	Strongly disagree	5
	missing	0
		183

Questions on the impact of information and communications technologies (ICT) on learning in general





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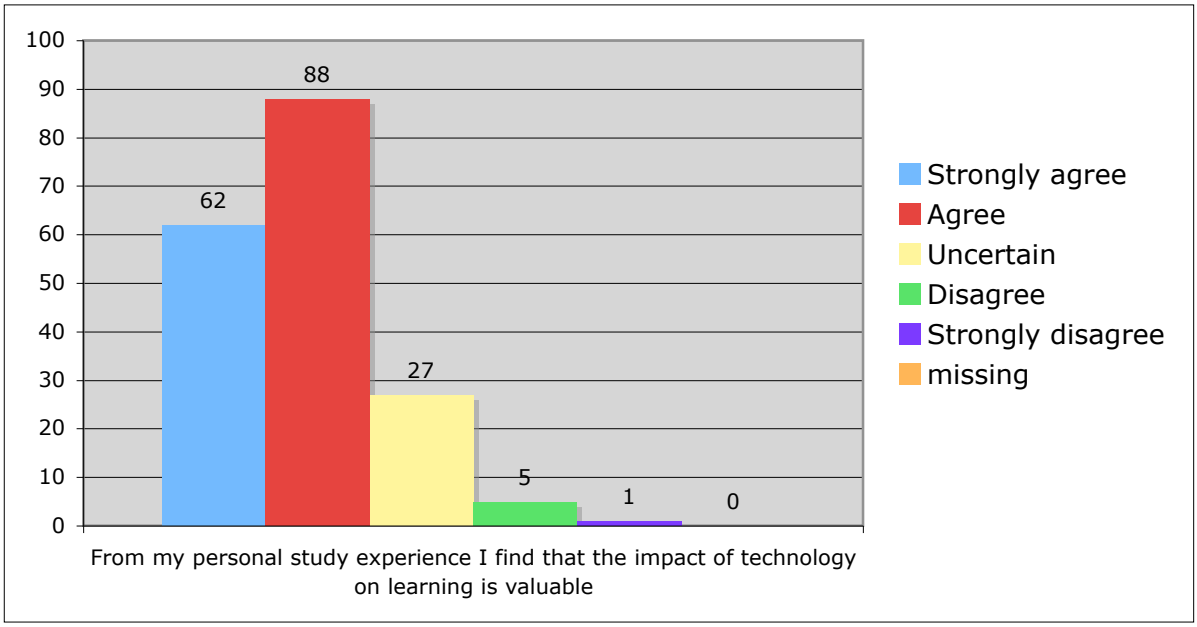
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Only optimistic people think that the impact of technology on learning is beneficial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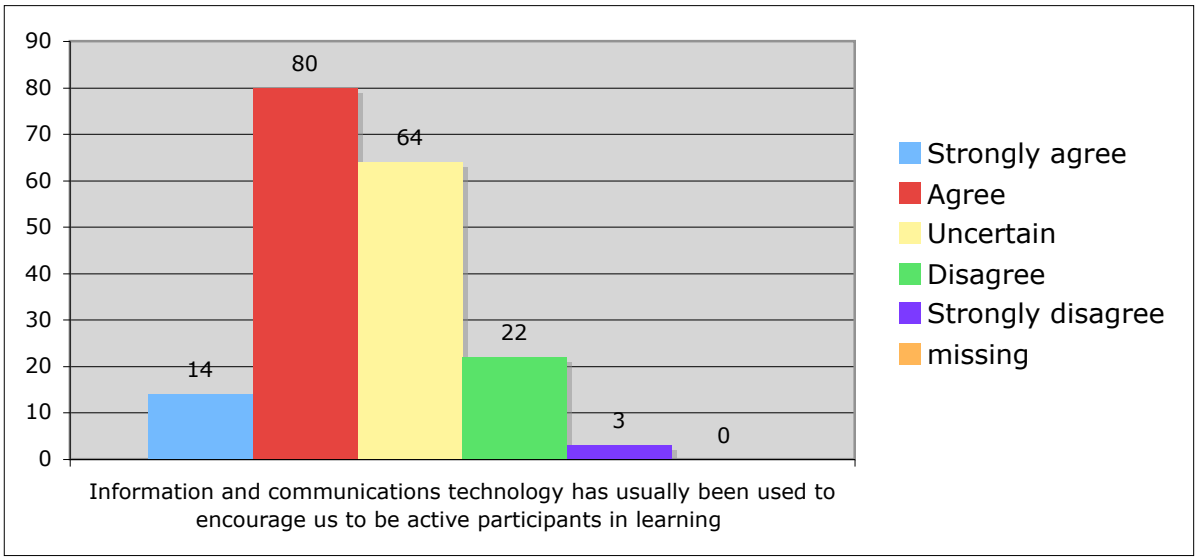
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
From my personal study experience I find that the impact of technology on learning is valuable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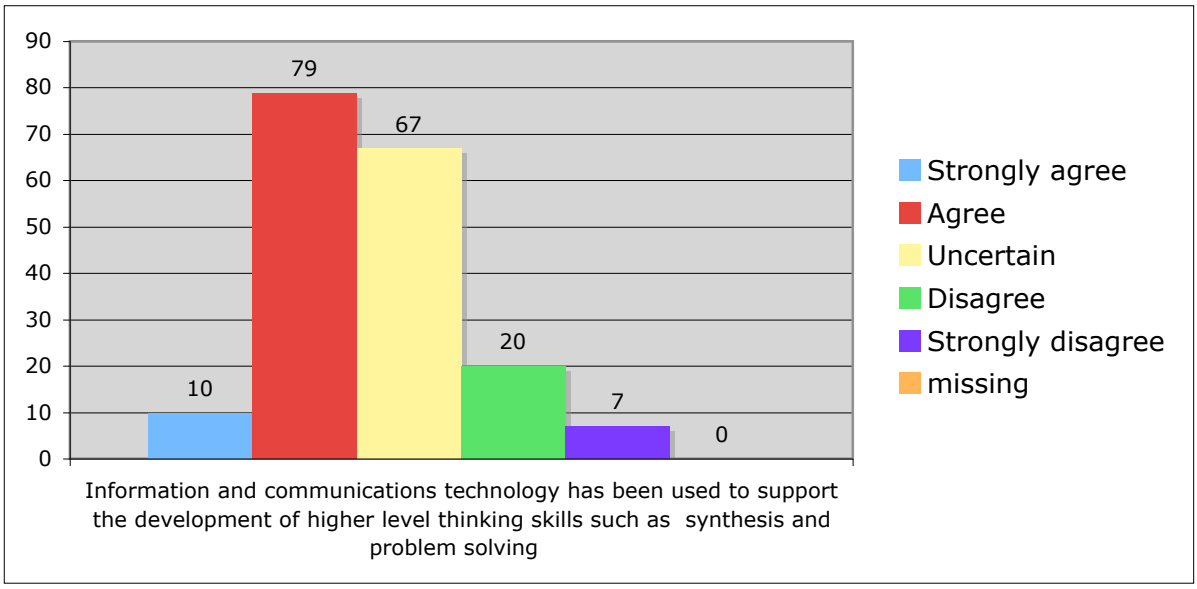
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Information and communications technology has usually been used to encourage us to be active participants in learning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79
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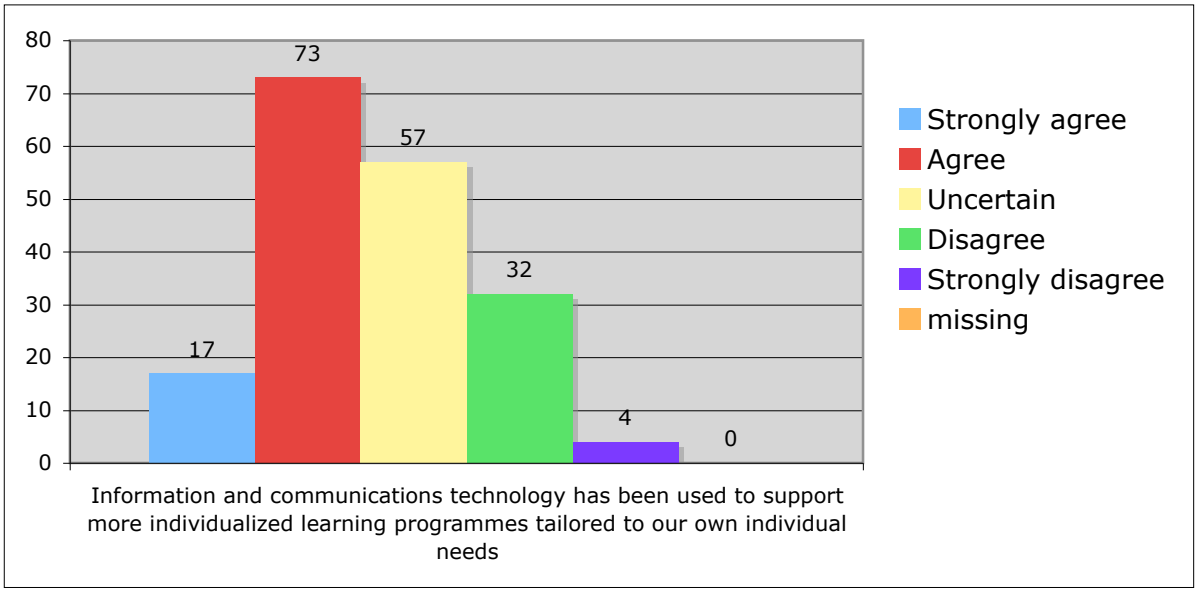
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving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10
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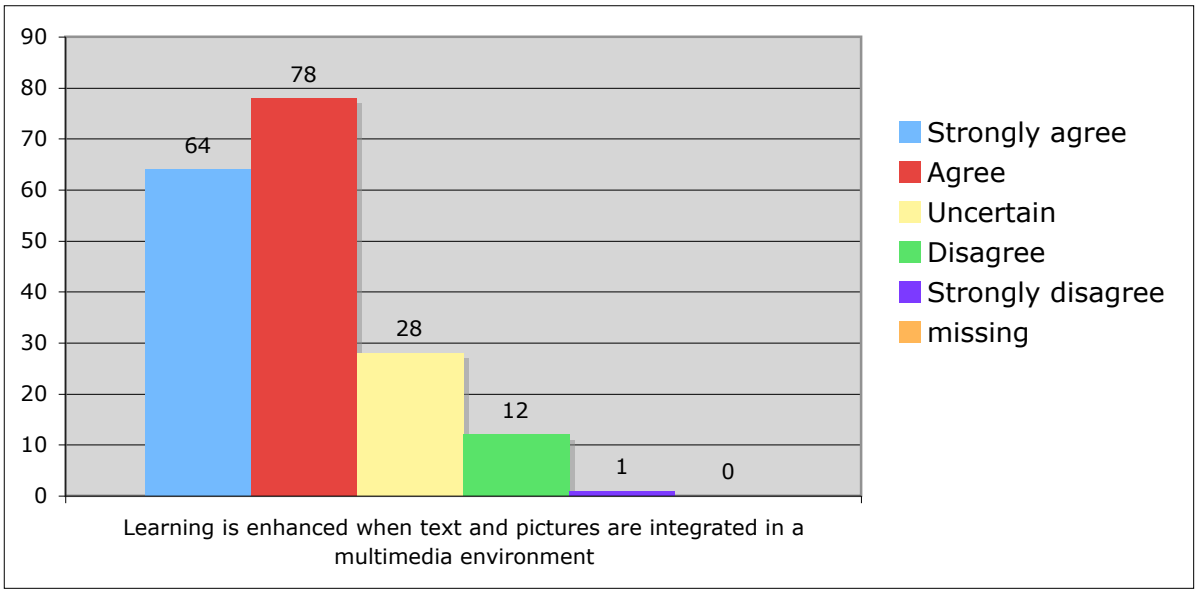
73
57
32
17
4
0
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs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78
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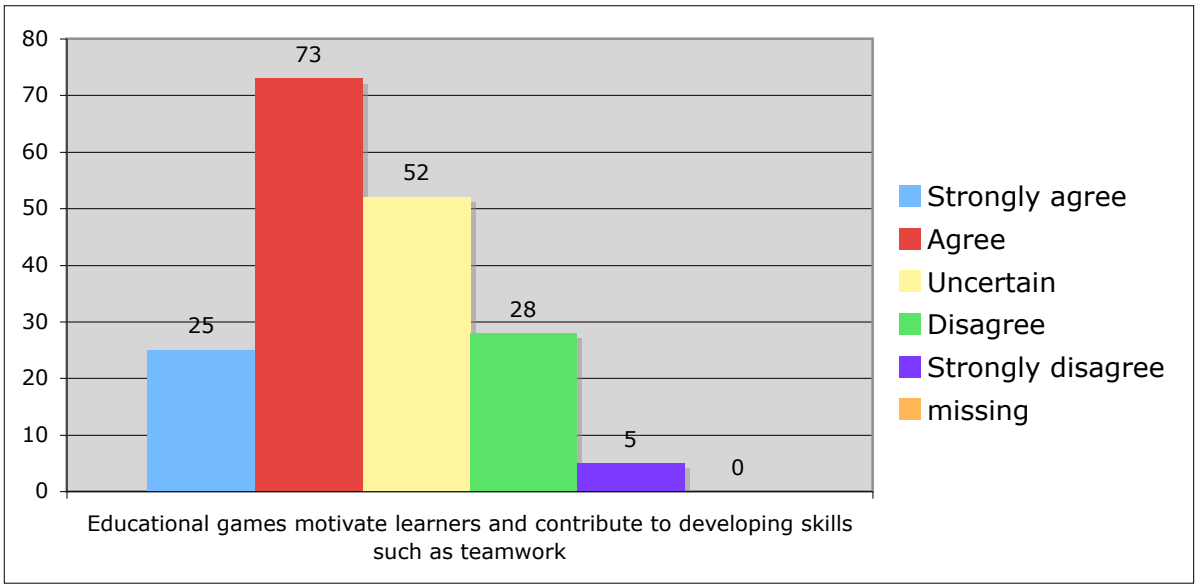
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Learning is enhanced when text and pictures are integrated in a multimedia environment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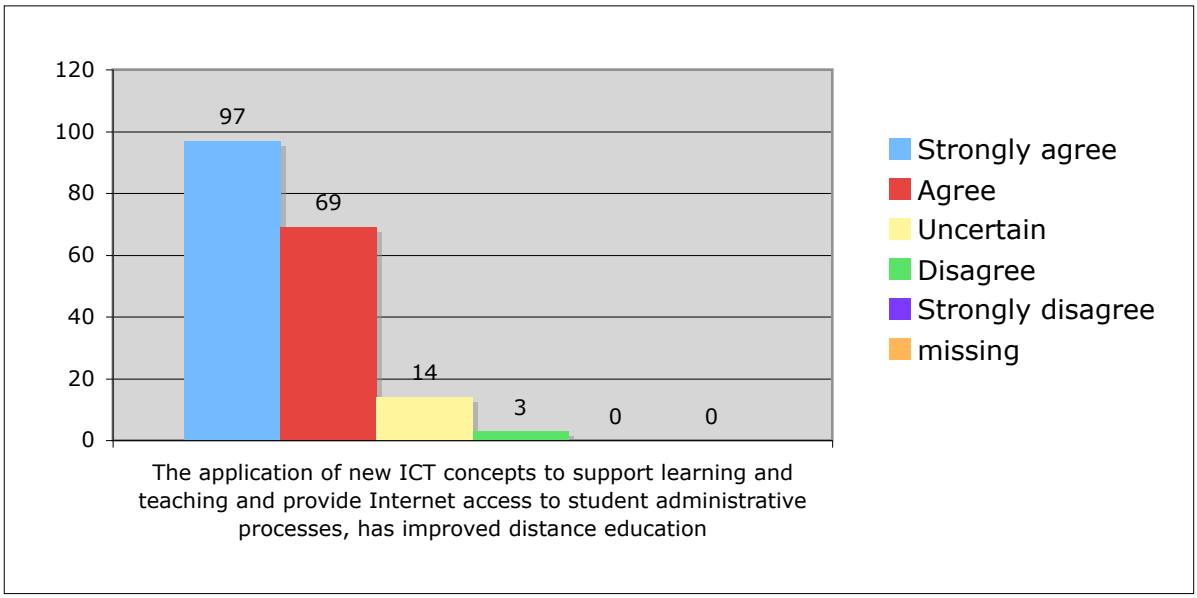
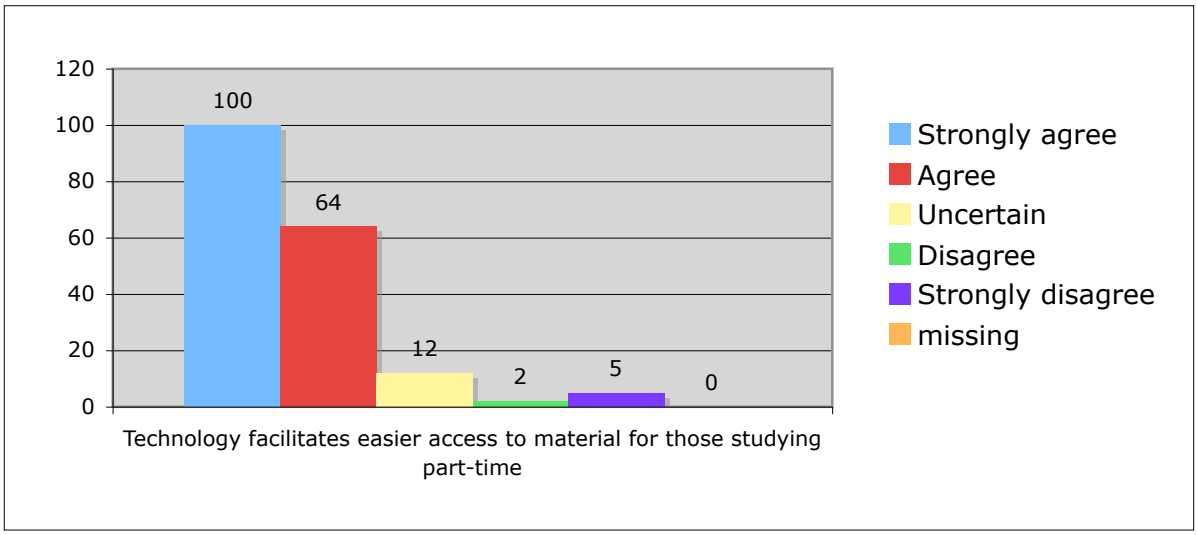
73
52
28
25
5
0
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Educational games motivate learners and contribute to developing skills such as teamwork

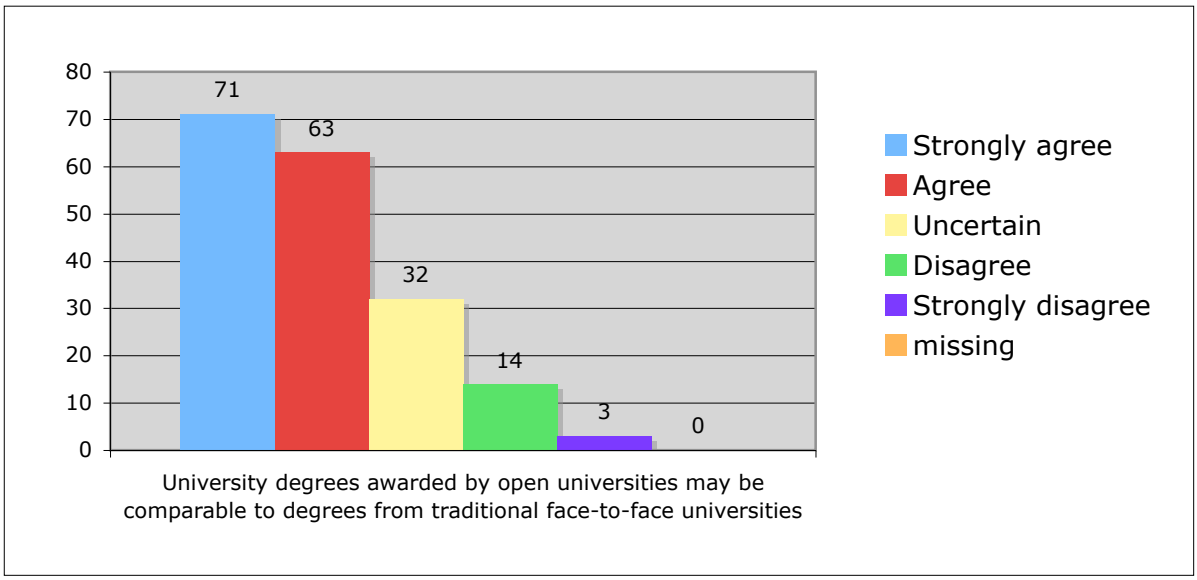
Questions on the impact of information and communications technologies (ICT) on learning in Open Universities

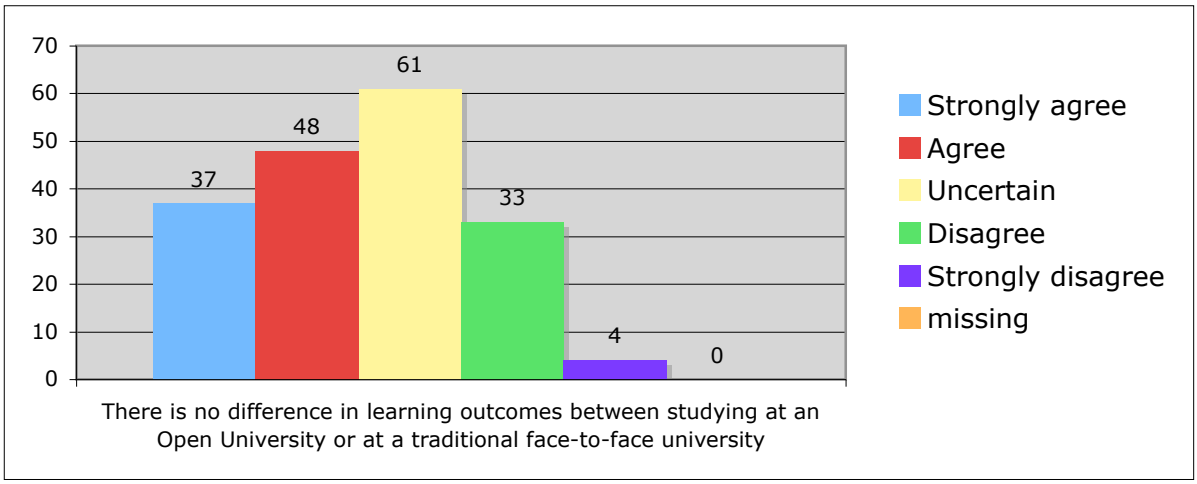
	The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has	
17	**improved distance education**	
	Strongly agree	97
	Agree	69
	Uncertain	14
	Disagree	3
	Strongly disagree	0
	missing	0
		183
	Technology facilitates easier access to material for those studying part-	
18	**time**	
	Strongly agree	100
	Agree	64
	Uncertain	12
	Disagree	2
	Strongly disagree	5
	missing	0
		183
	University degrees awarded by open universities may be comparable to	
19	**degrees from traditional face-to-face universities**	
	Strongly agree	71
	Agree	63
	Uncertain	32
	Disagree	14
	Strongly disagree	3
	missing	0
		183
	There is no difference in learning outcomes between studying at an Open	
20	**University or at a traditional face-to-face university**	
	Strongly agree	37
	Agree	48
	Uncertain	61
	Disagree	33
	Strongly disagree	4
	missing	0
		183
	Study at an Open University is especially of advantage to adults who have	
21	**work and family obligations**	
	Strongly agree	165
	Agree	14
	Uncertain	2
	Disagree	1
	Strongly disagree	1
	missing	0
		183

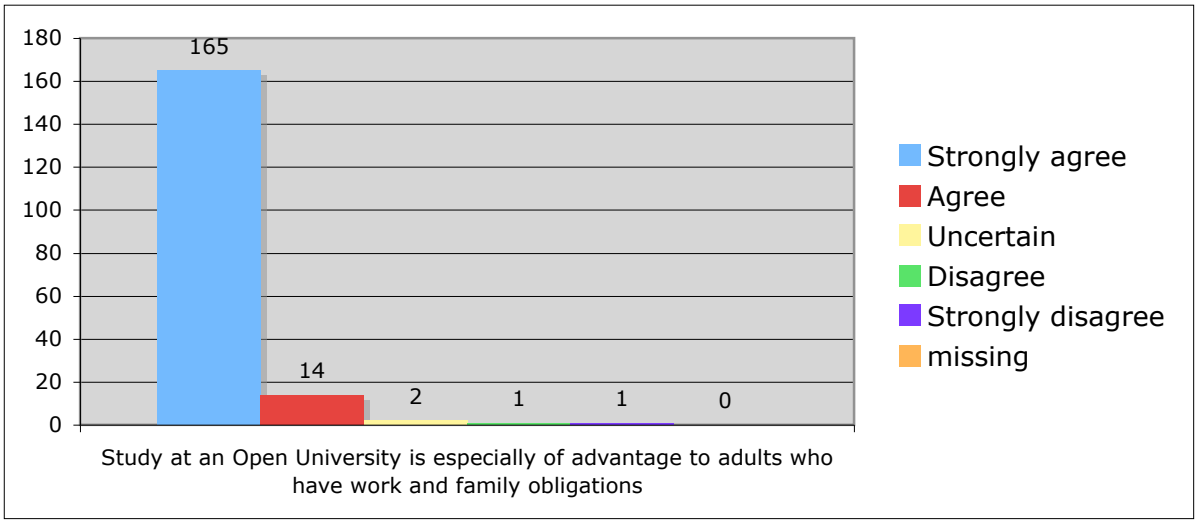
Questions on the impact of information and communications technologies (ICT) on learning in Open Universities








70
60
50
40
30
20
10
0
37
48
61
33
4
0
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

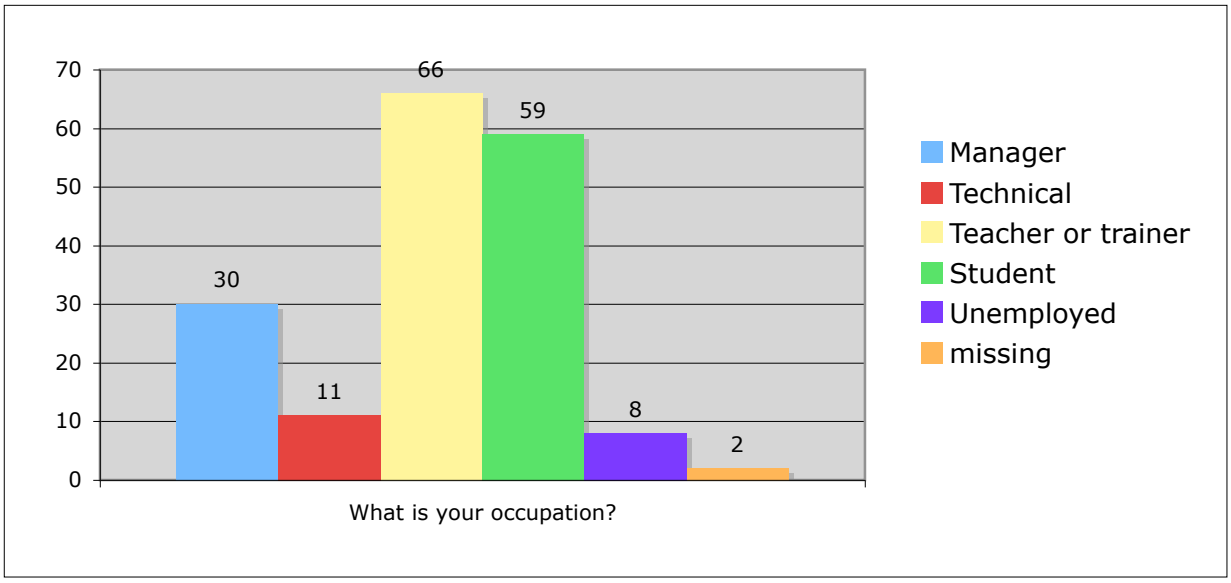

180
160
140
120
100
80
60
40
20
0
165
14
2
1
1
0
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Study at an Open University is especially of advantage to adults who have work and family obligations

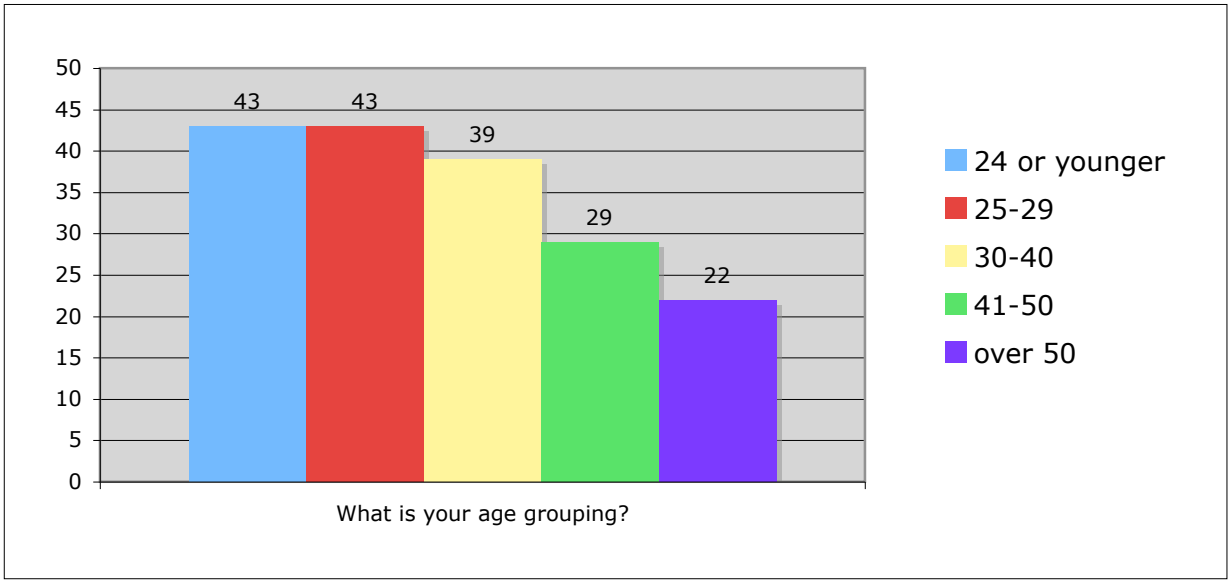
B.2 Beschreibende Analyse der Kontrollgruppe

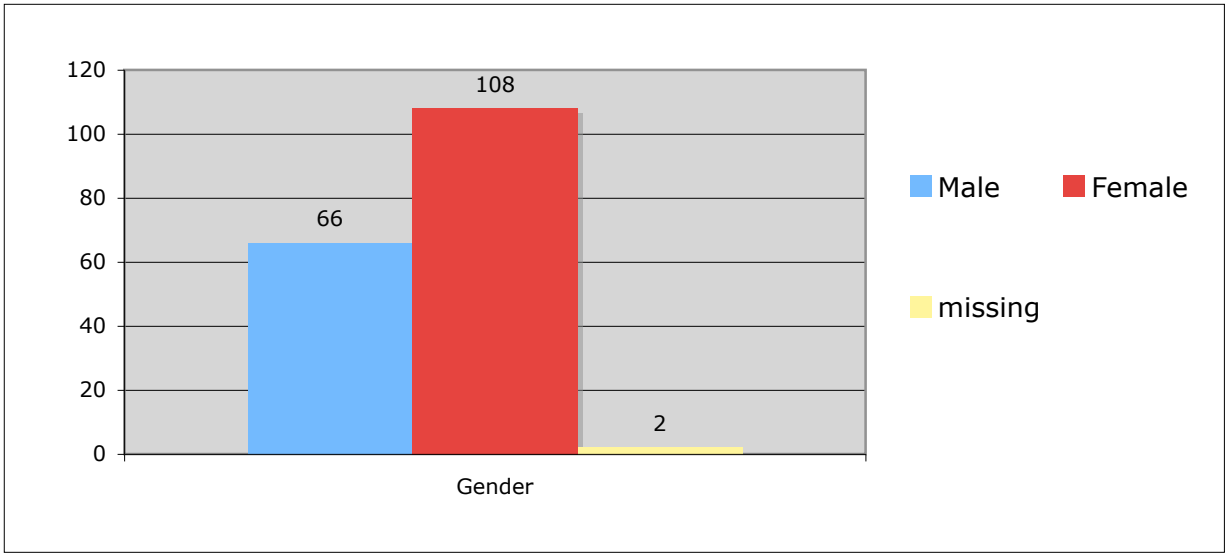
Personal Background

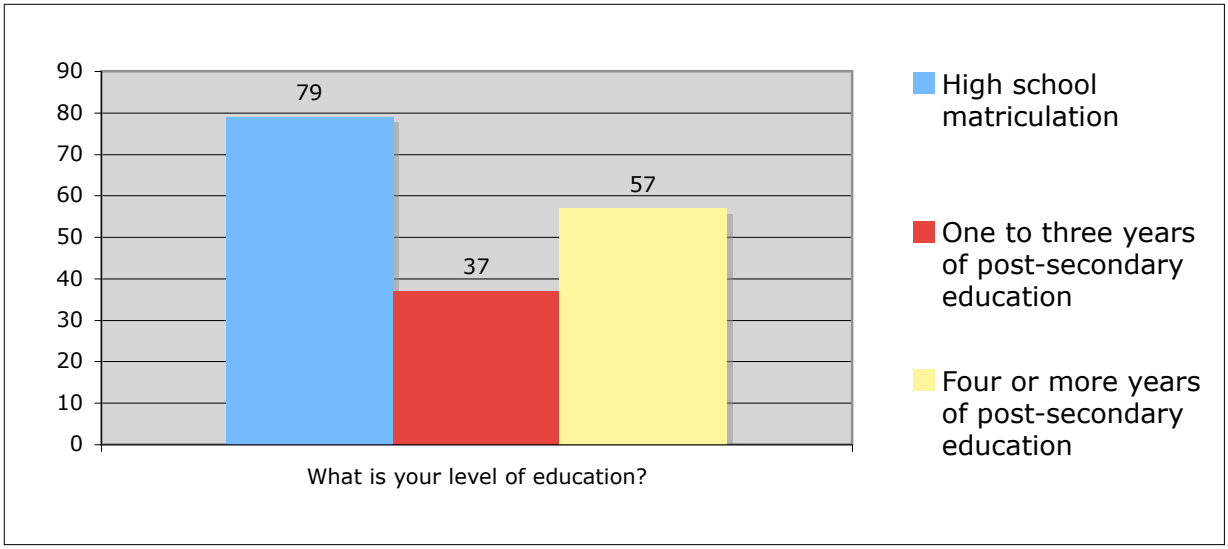
1	**What is your occupation?**	
	Manager	30
	Technical	11
	Teacher or trainer	66
	Student	59
	Unemployed	8
	missing	2
		176
2	**What is your age grouping?**	
	24 or younger	43
	25-29	43
	30-40	39
	41-50	29
	over 50	22
	missing	0
		176
3	**Gender**	
	Male	66
	Female	108
	missing	2
		176
4	**What is your level of education?**	
	High school matriculation	79
	One to three years of post-secondary education	37
	Four or more years of post-secondary education	57
	missing	1
		174
5	**To what extent have you used advanced technological equipment in your professional life?**	
	A lot	70
	Quite a bit	68
	Little	24
	Very little	8
	Not at all	4
	missing	2
		176
6	**Have you had to change your way of working because of technological developments?**	
	Yes. More than once	100
	Yes. Once	17
	No	55
	missing	4
		176

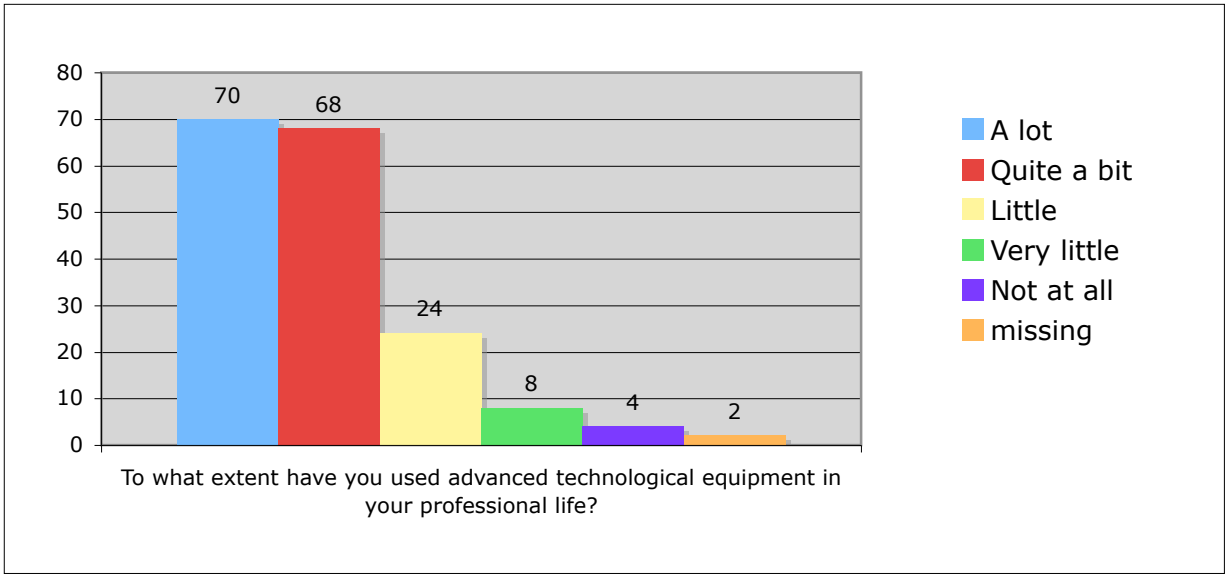
Personal Background

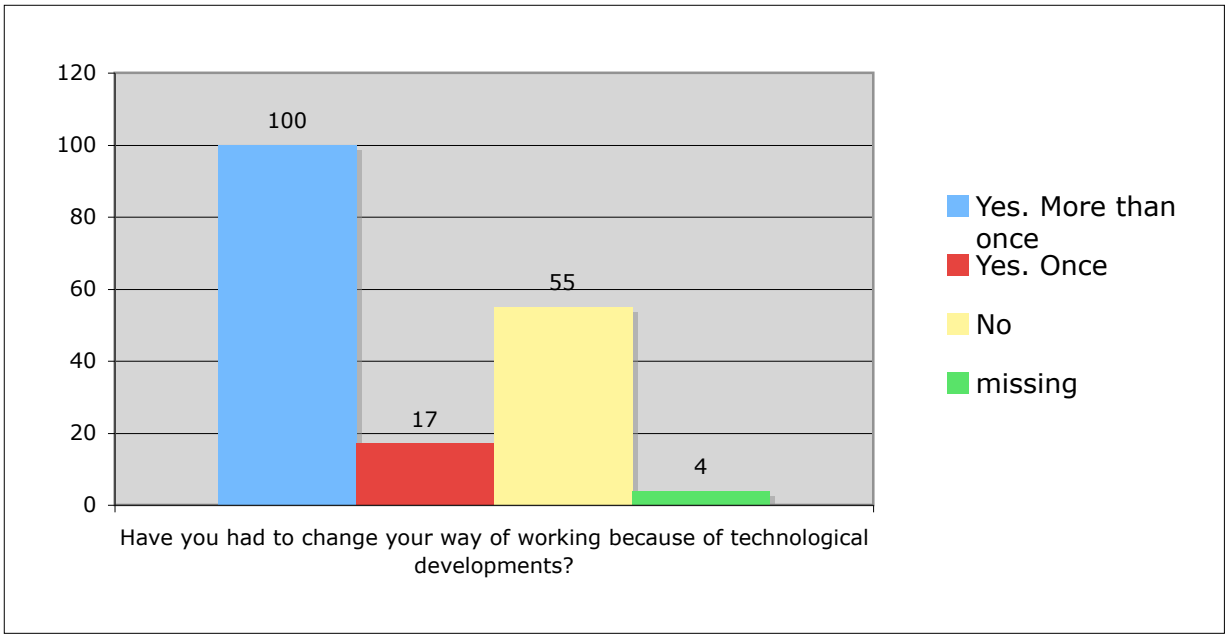







90
80
70
60
50
40
30
20
10
0
79
37
57
What is your level of education?
High school matriculation
One to three years of post-secondary education
Four or more years of post-secondary education


80
70
60
50
40
30
20
10
0
70
68
24
8
4
2
To what extent have you used advanced technological equipment in your professional life?
A lot
Quite a bit
Little
Very little
Not at all
missing

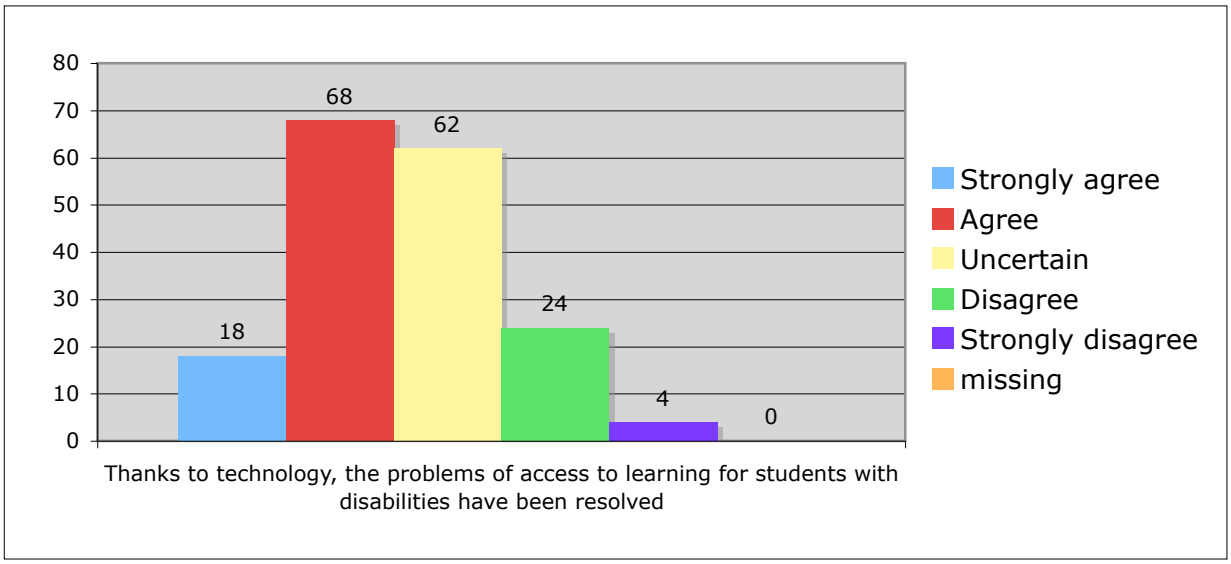

120
100
80
60
40
20
0
100
17
55
4
Have you had to change your way of working because of technological developments?
Yes. More than once
Yes. Once
No
missing

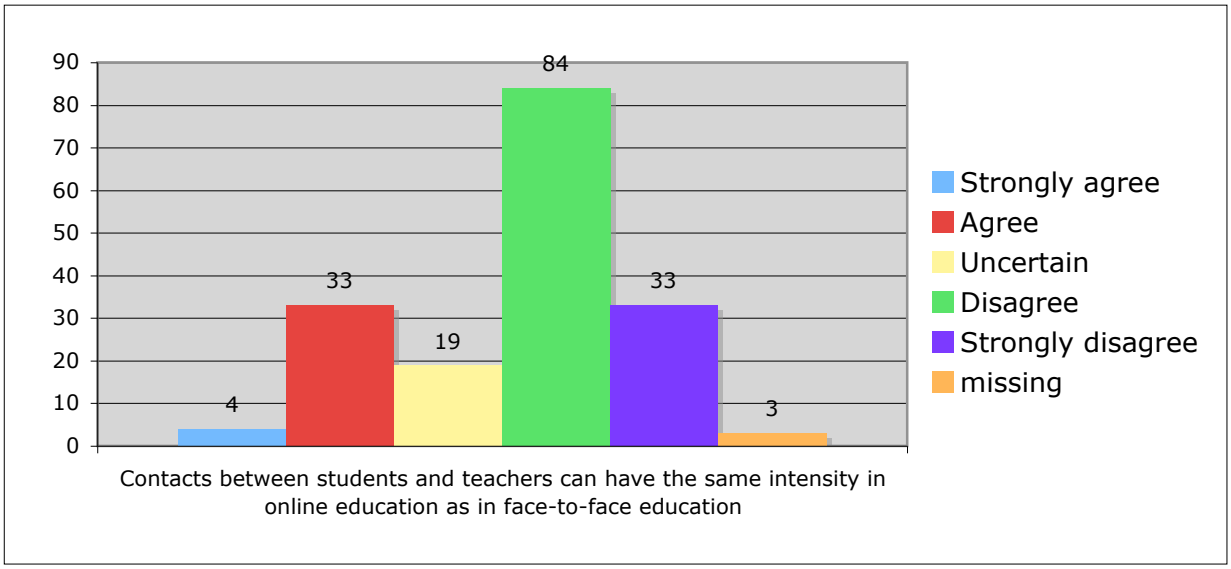
Questions on the impact of information and communications technologies (ICT) on learning in general

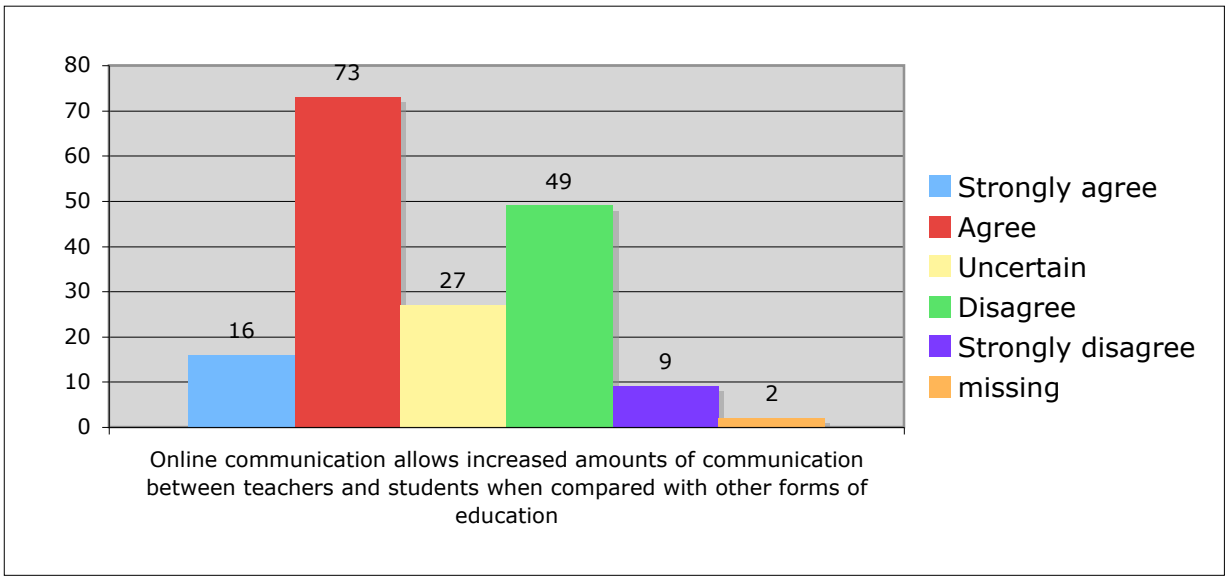
7	**Thanks to technology, the problems of access to learning for students with disabilities have been resolved**	
	Strongly agree	18
	Agree	68
	Uncertain	62
	Disagree	24
	Strongly disagree	4
	missing	0
		176
8	**Contacts between students and teachers can have the same intensity in online education as in face-to-face education**	
	Strongly agree	4
	Agree	33
	Uncertain	19
	Disagree	84
	Strongly disagree	33
	missing	3
		176
9	**Online communication allows increased amounts of communication between teachers and students when compared with other forms of education**	
	Strongly agree	16
	Agree	73
	Uncertain	27
	Disagree	49
	Strongly disagree	9
	missing	2
		176
10	**Only optimistic people think that the impact of technology on learning is beneficial**	
	Strongly agree	5
	Agree	32
	Uncertain	36
	Disagree	91
	Strongly disagree	10
	missing	2
		176
11	**From my personal study experience I find that the impact of technology on learning is valuable**	
	Strongly agree	56
	Agree	92
	Uncertain	16
	Disagree	8
	Strongly disagree	2
	missing	2
		176

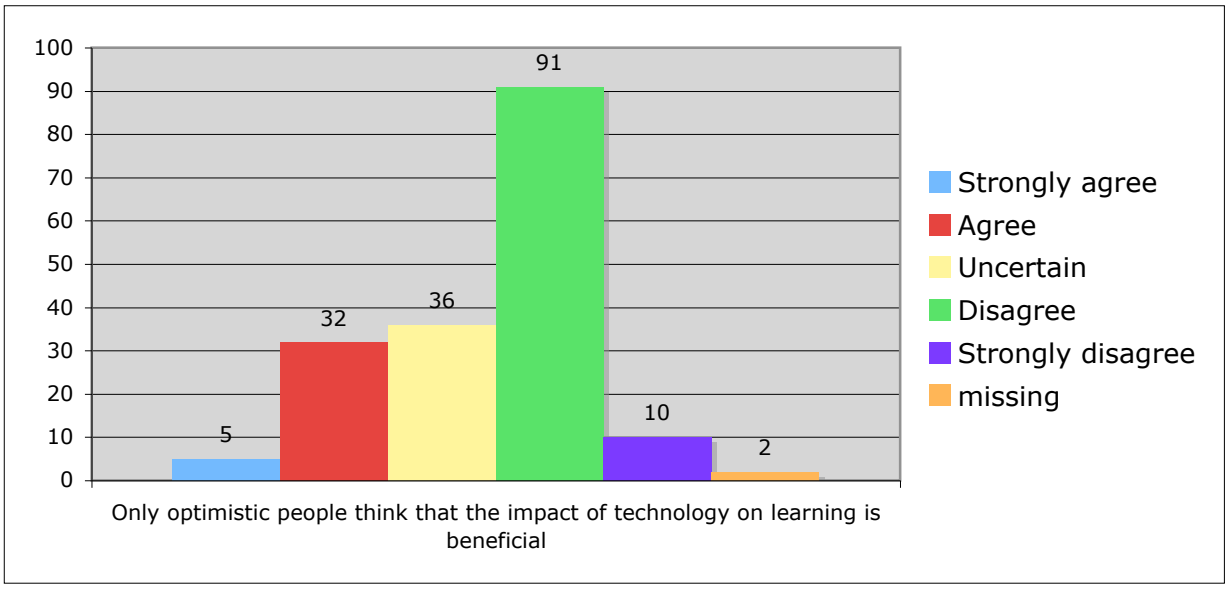
12	**Information and communications technology has usually been used to encourage us to be active participants in learning**	
	Strongly agree	17
	Agree	79
	Uncertain	50
	Disagree	26
	Strongly disagree	2
	missing	2
		176
13	**Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving**	
	Strongly agree	14
	Agree	80
	Uncertain	50
	Disagree	27
	Strongly disagree	4
	missing	1
		176
14	**Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs**	
	Strongly agree	29
	Agree	82
	Uncertain	36
	Disagree	22
	Strongly disagree	3
	missing	4
		176
15	**Learning is enhanced when text and pictures are integrated in a multimedia environment**	
	Strongly agree	57
	Agree	98
	Uncertain	14
	Disagree	4
	Strongly disagree	1
	missing	2
		176
16	**Educational games motivate learners and contribute to developing skills such as teamwork**	
	Strongly agree	60
	Agree	79
	Uncertain	22
	Disagree	8
	Strongly disagree	4
	missing	3
		176

Questions on the impact of information and communications technologies (ICT) on learning in general








100
90
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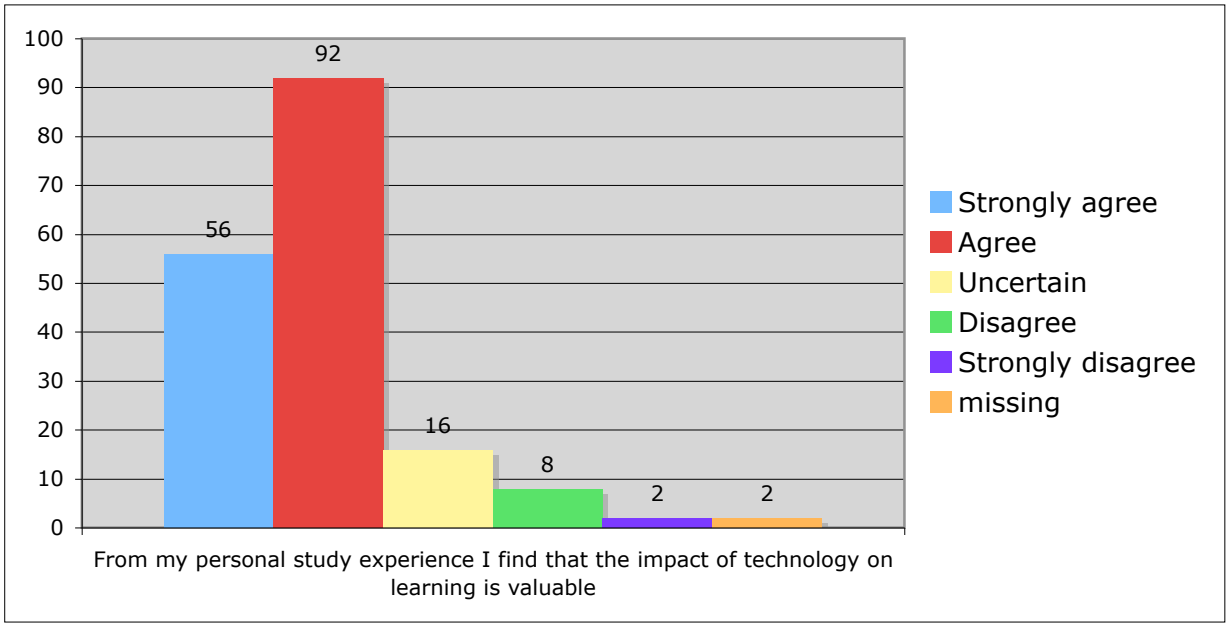
70
60
50
40
30
20
10
0
5
32
36
91
10
2
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Only optimistic people think that the impact of technology on learning is beneficial


100
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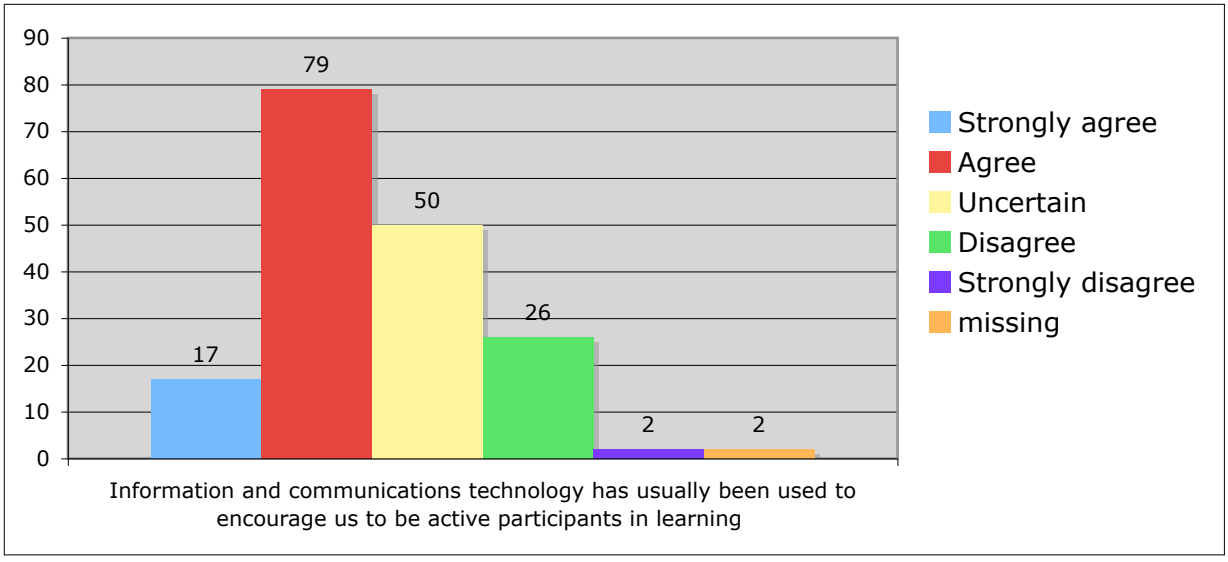
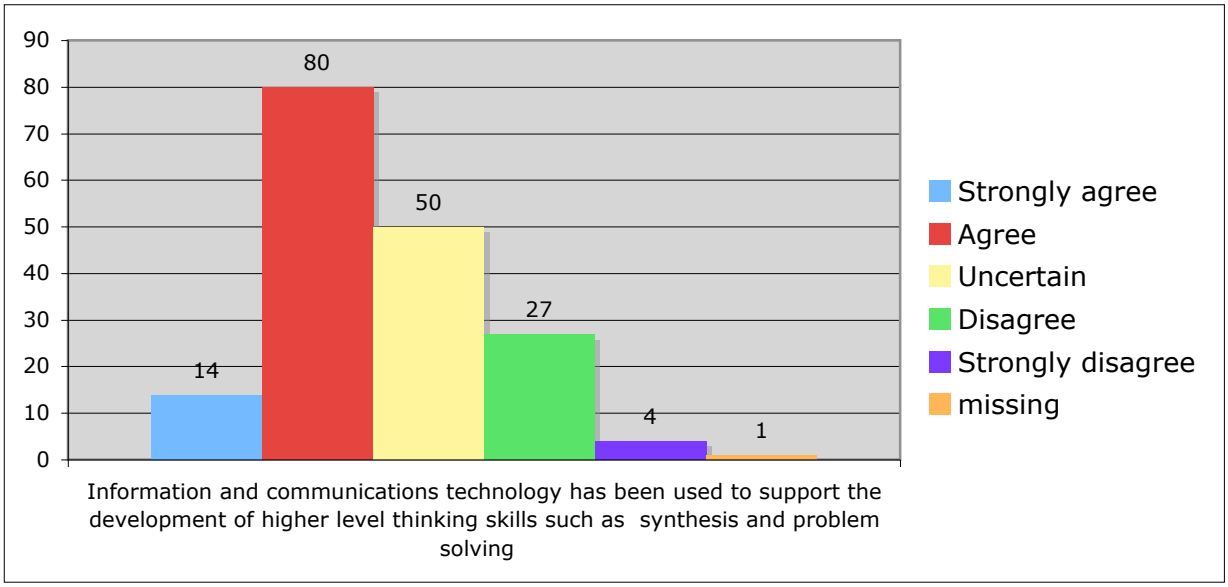
80
70
60
50
40
30
20
10
0
56
92
16
8
2
2
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
From my personal study experience I find that the impact of technology on learning is valuable


90
80
70
60
50
40
30
20
10
0
17
79
50
26
2
2
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Information and communications technology has usually been used to encourage us to be active participants in learning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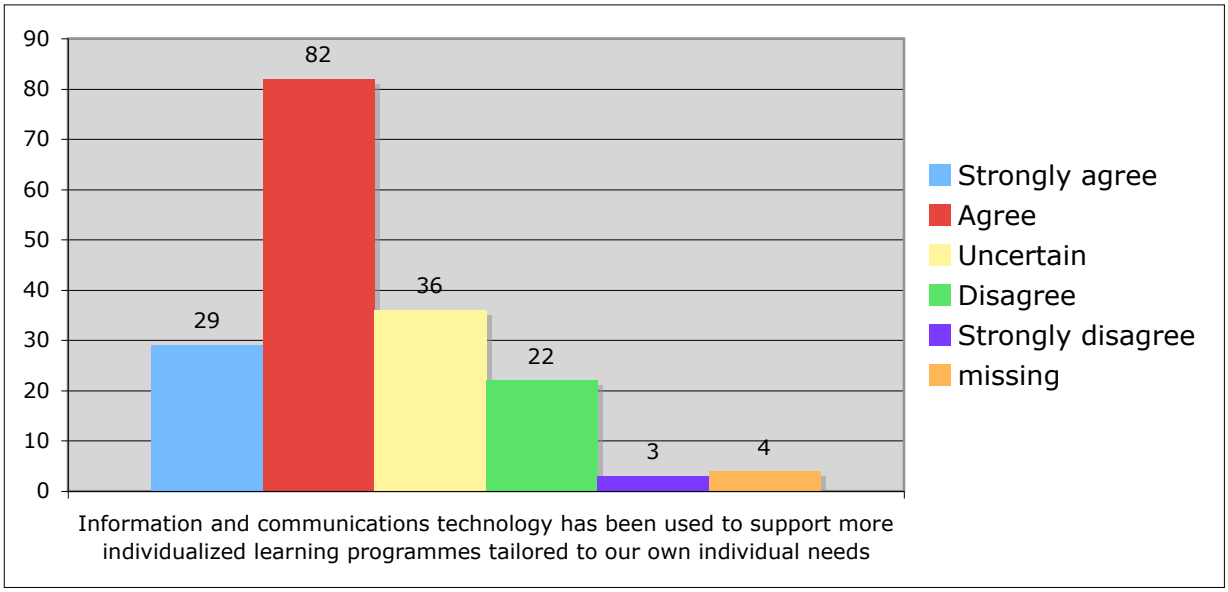
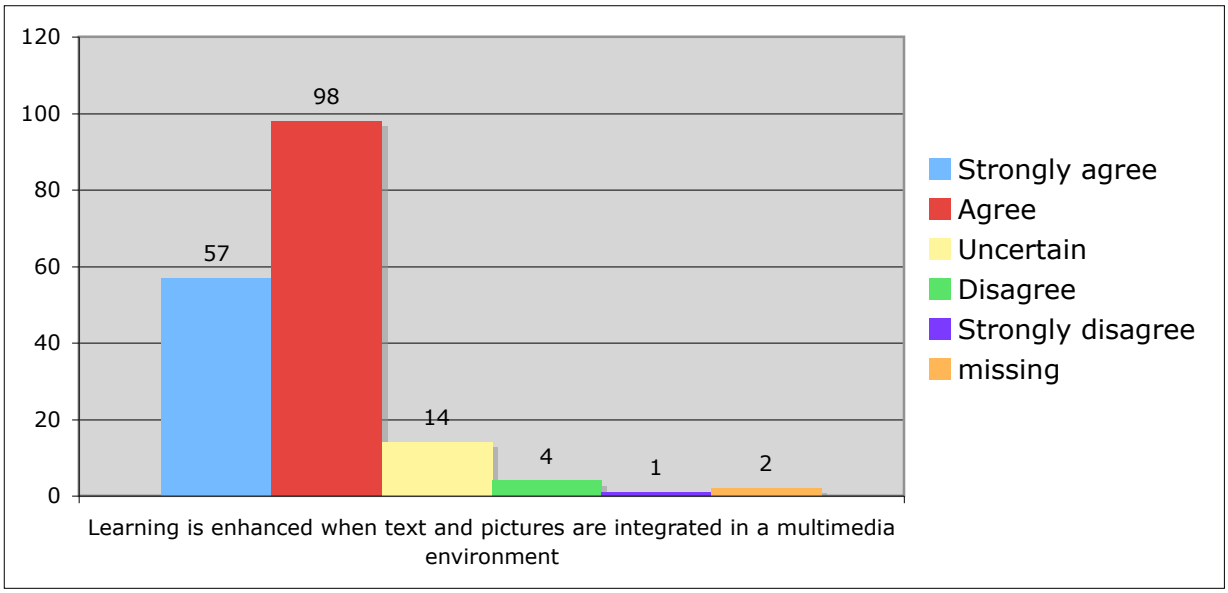
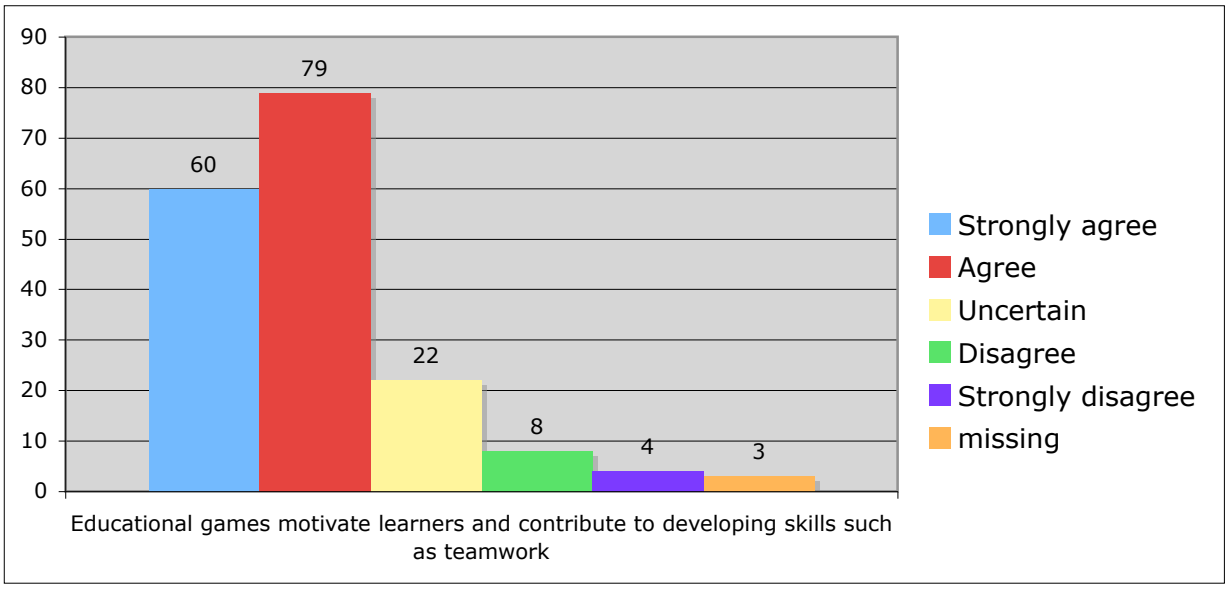
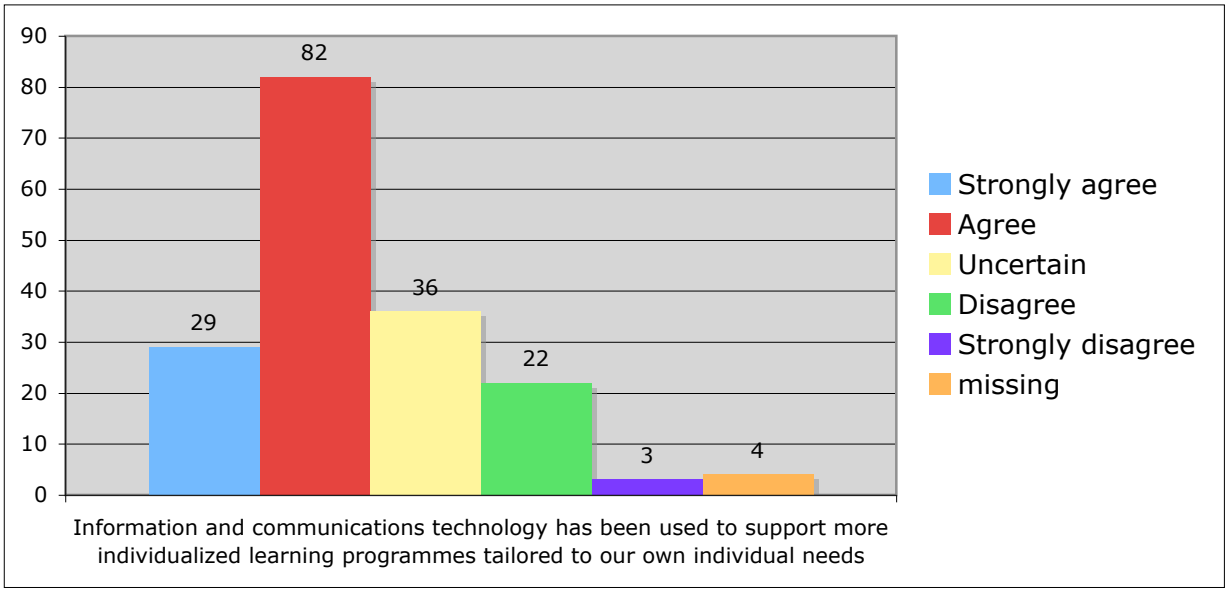
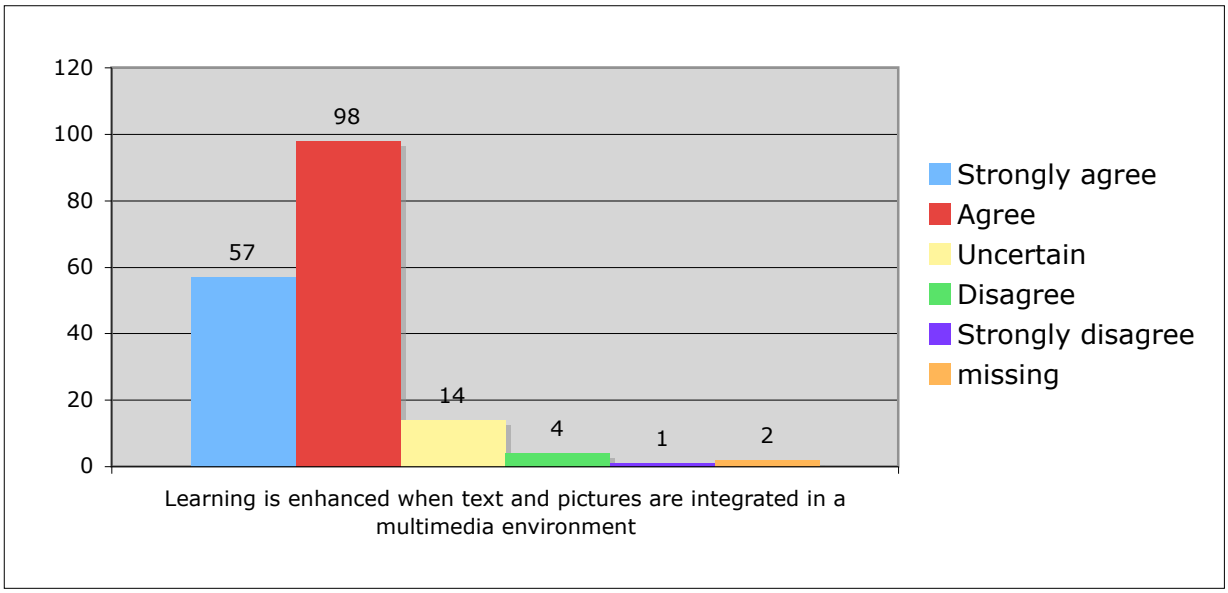
80
70
60
50
40
30
20
10
0
80
50
27
14
4
1
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving


90
80
70
60
50
40
30
20
10
0
82
36
29
22
3
4
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs


120
100
80
60
40
20
0
98
57
14
4
1
2
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Learning is enhanced when text and pictures are integrated in a multimedia environment


90
80
70
60
50
40
30
20
10
0
60
79
22
8
4
3
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Educational games motivate learners and contribute to developing skills such as teamwork

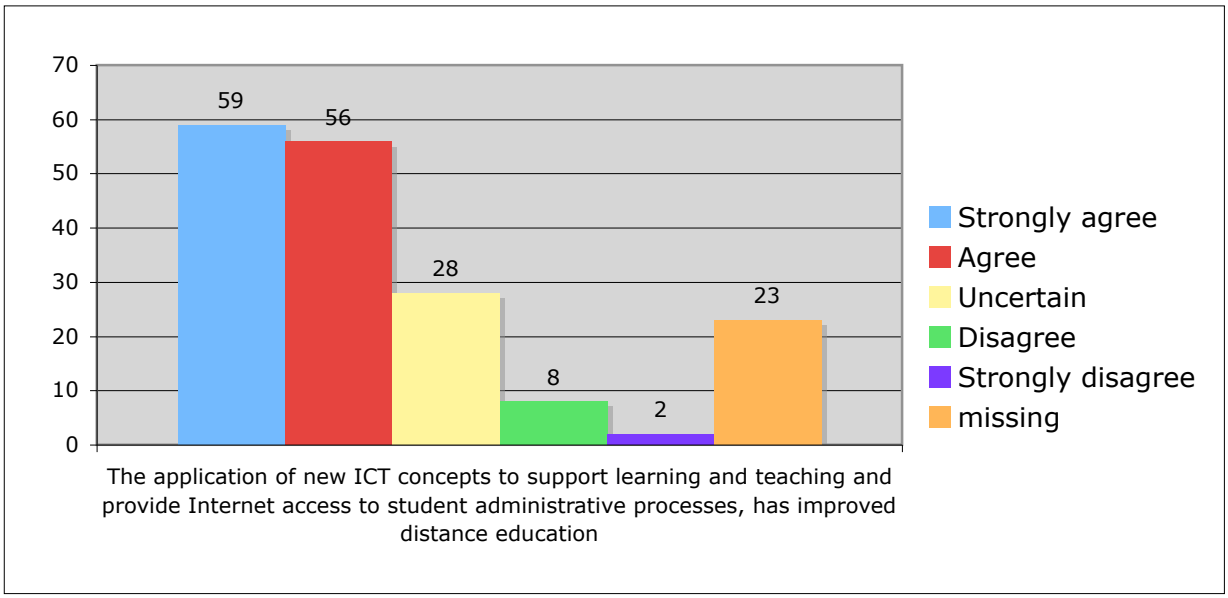

90
80
70
60
50
40
30
20
10
0
29
82
36
22
3
4
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

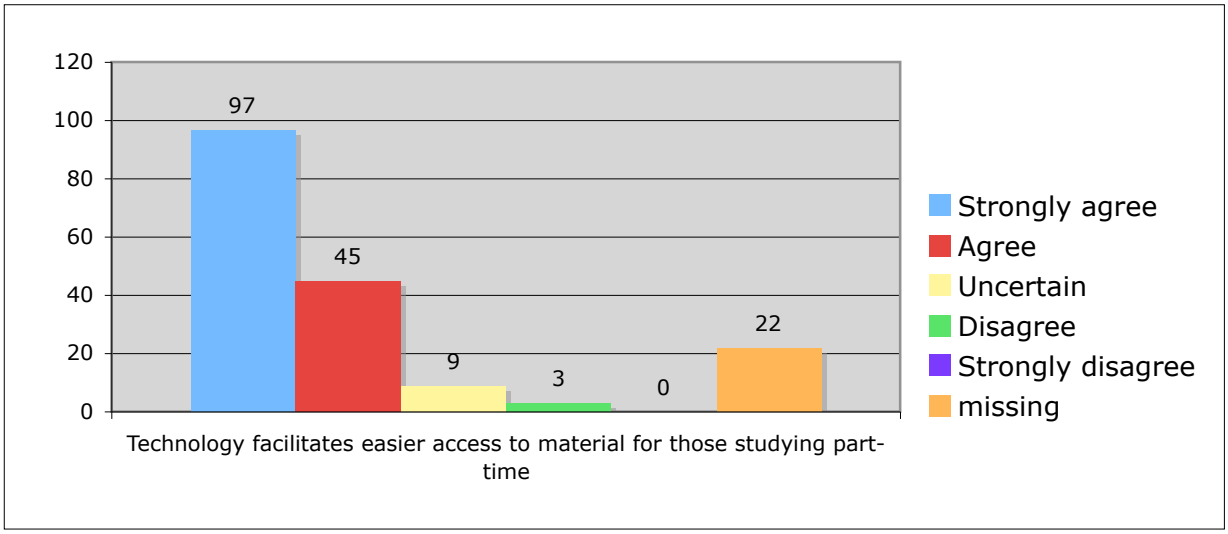

120
100
80
60
40
20
0
57
98
14
4
1
2
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Learning is enhanced when text and pictures are integrated in a multimedia environment

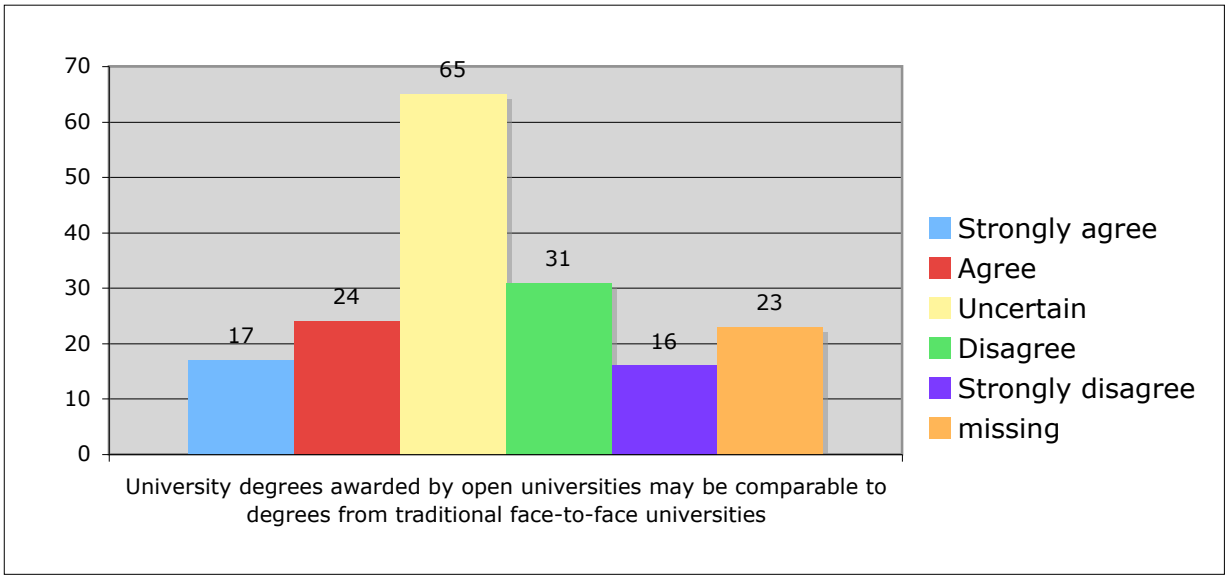
Questions on the impact of information and communications technologies (ICT) on learning in Open Universities

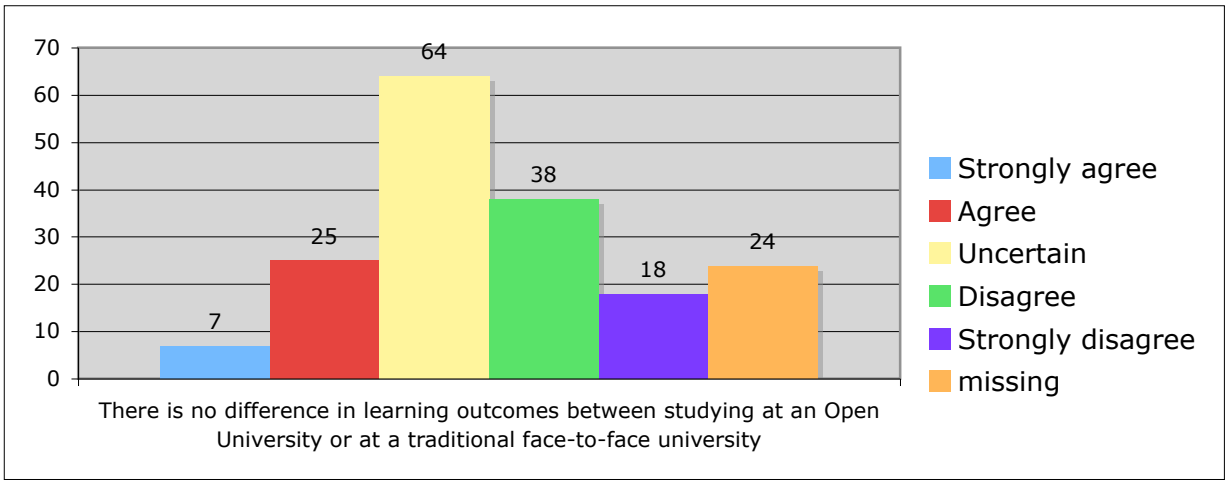
17	**The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education**	
	Strongly agree	59
	Agree	56
	Uncertain	28
	Disagree	8
	Strongly disagree	2
	missing	23
		176
18	**Technology facilitates easier access to material for those studying part-time**	
	Strongly agree	97
	Agree	45
	Uncertain	9
	Disagree	3
	Strongly disagree	0
	missing	22
		176
19	**University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities**	
	Strongly agree	17
	Agree	24
	Uncertain	65
	Disagree	31
	Strongly disagree	16
	missing	23
		176
20	**There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university**	
	Strongly agree	7
	Agree	25
	Uncertain	64
	Disagree	38
	Strongly disagree	18
	missing	24
		176
21	**Study at an Open University is especially of advantage to adults who have work and family obligations**	
	Strongly agree	95
	Agree	43
	Uncertain	8
	Disagree	4
	Strongly disagree	4
	missing	22
		176

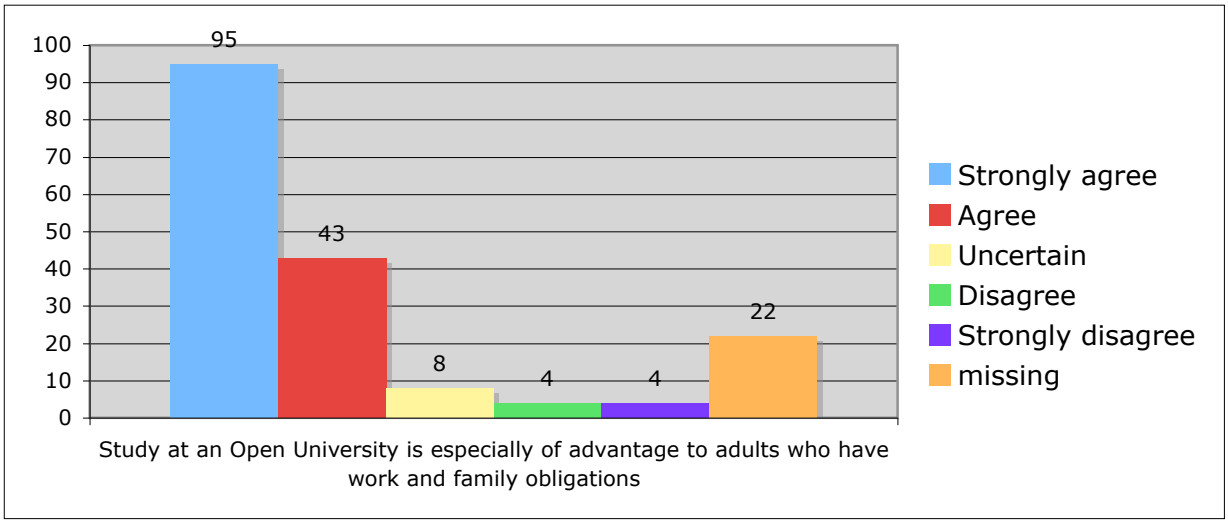
Questions on the impact of information and communications technologies (ICT) on learning in Open Universities








70
60
50
40
30
20
10
0
64
38
25
24
18
7
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university


100
90
80
70
60
50
40
30
20
10
0
95
43
8
4
4
22
Strongly agree
Agree
Uncertain
Disagree
Strongly disagree
missing
Study at an Open University is especially of advantage to adults who have work and family obligations

B.3 Kreuztabellen für die beiden Studiengruppen

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What is your occupation? * Main group/Control group	357	99,4%	2	,6%	359	100,0%
What is your age grouping? * Main group/Control group	359	100,0%	0	,0%	359	100,0%
Gender * Main group/Control group	357	99,4%	2	,6%	359	100,0%
What is your level of education? * Main group/Control group	356	99,2%	3	,8%	359	100,0%
To what extent have you used advanced technological equipment in your professional life? * Main group/Control group	357	99,4%	2	,6%	359	100,0%
Have you had to change your way of working because of technological developments? * Main group/Control group	355	98,9%	4	1,1%	359	100,0%
Thanks to technology, the problems of access to learning for students with disabilities have been resolved * Main group/Control group	359	100,0%	0	,0%	359	100,0%
Contacts between students and teachers can have the same intensity in online education as in face-to-face education * Main group/Control group	356	99,2%	3	,8%	359	100,0%
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * Main group/Control group	357	99,4%	2	,6%	359	100,0%
Only optimistic people think that the impact of technology on learning is beneficial * Main group/Control group	357	99,4%	2	,6%	359	100,0%
From my personal study experience I find that the impact of technology on learning is valuable * Main group/Control group	357	99,4%	2	,6%	359	100,0%
Information and communications technology has usually been used to encourage us to be active participants in learning * Main group/Control group	357	99,4%	2	,6%	359	100,0%

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * Main group/Control group	358	99,7%	1	,3%	359	100,0%
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * Main group/Control group	355	98,9%	4	1,1%	359	100,0%
Learning is enhanced when text and pictures are integrated in a multimedia environment * Main group/Control group	357	99,4%	2	,6%	359	100,0%
Educational games motivate learners and contribute to developing skills such as teamwork * Main group/Control group	356	99,2%	3	,8%	359	100,0%
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * Main group/Control group	336	93,6%	23	6,4%	359	100,0%
Technology facilitates easier access to material for those studying part-time * Main group/Control group	337	93,9%	22	6,1%	359	100,0%
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * Main group/Control group	336	93,6%	23	6,4%	359	100,0%
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * Main group/Control group	335	93,3%	24	6,7%	359	100,0%
Study at an Open University is especially of advantage to adults who have work and family obligations * Main group/Control group	337	93,9%	22	6,1%	359	100,0%

What is your occupation? * Main group/Control group

Crosstab

Count

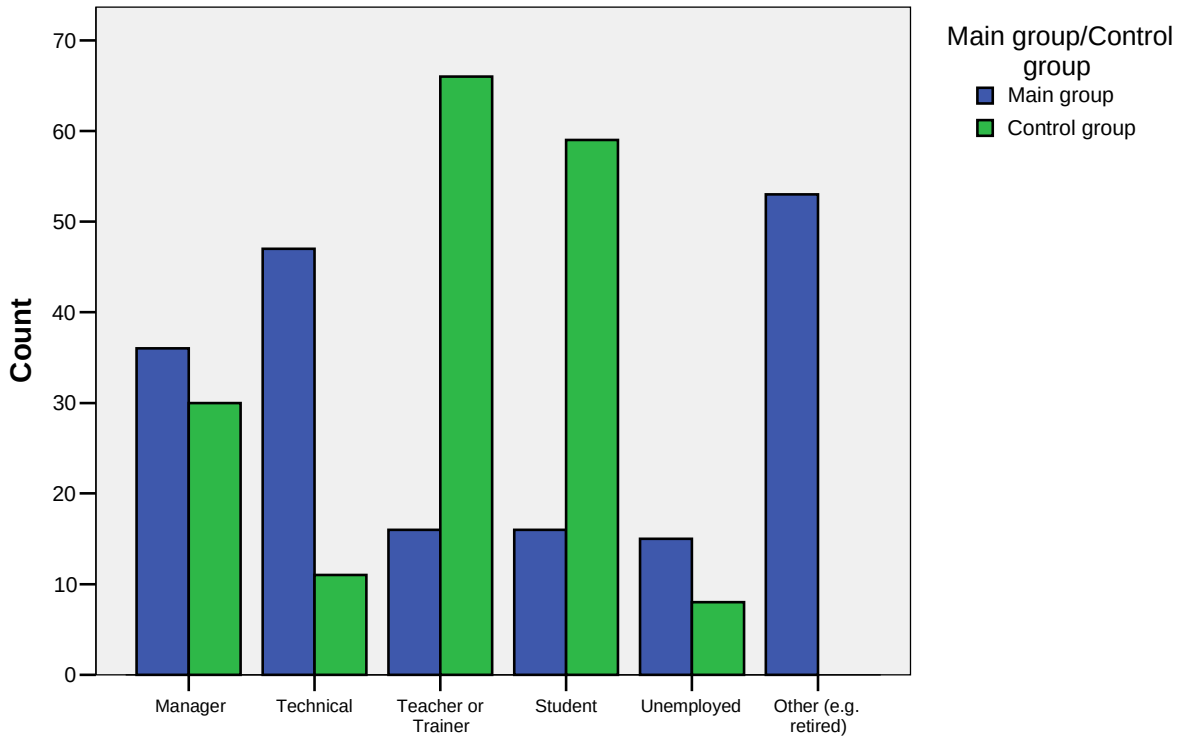
		Main group/Control group		
		Main group	Control group	Total
What is your occupation?	Manager	36	30	66
	Technical	47	11	58
	Teacher or Trainer	16	66	82
	Student	16	59	75
	Unemployed	15	8	23
	Other (e.g. retired)	53	0	53
Total		183	174	357

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	133,020[a]	5	,000
Likelihood Ratio	158,971	5	,000
Linear-by-Linear Association	6,724	1	,010
N of Valid Cases	357		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 11,21.

Bar Chart



What is your age grouping? * Main group/Control group

Crosstab

Count

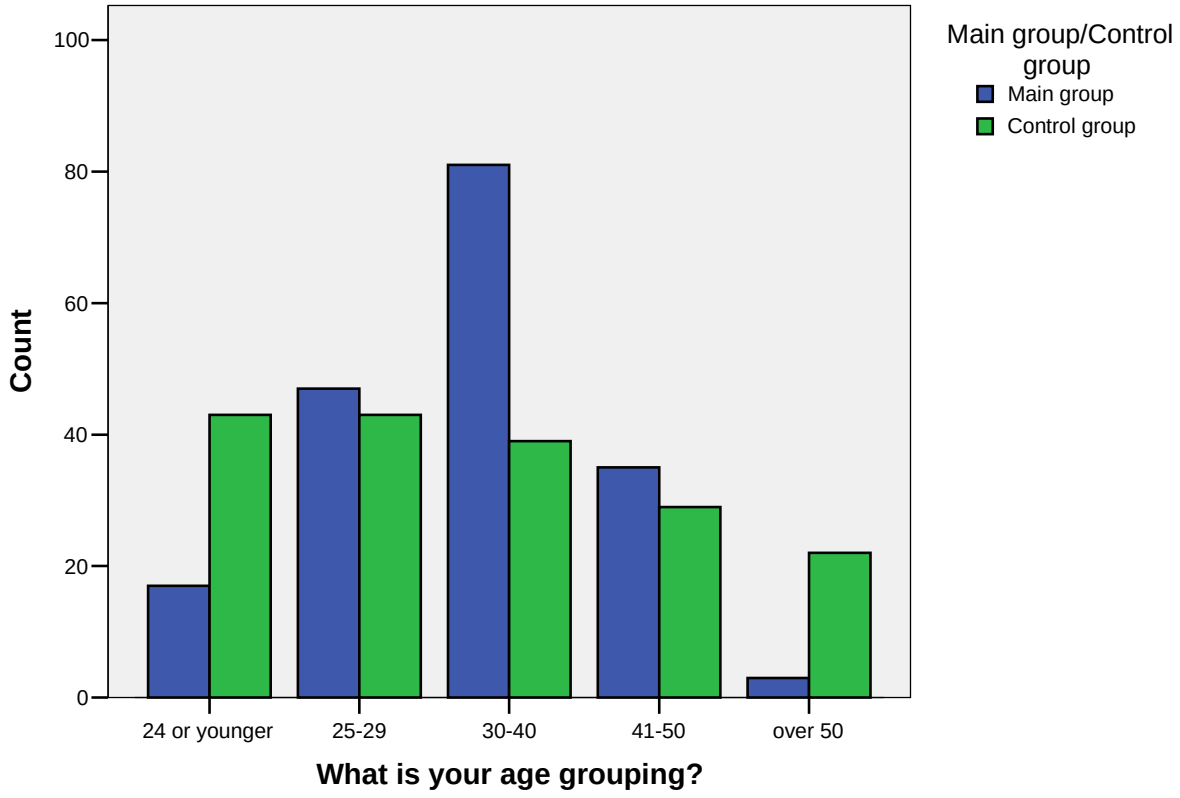
		Main group/Control group		
		Main group	Control group	Total
What is your age grouping?	24 or younger	17	43	60
	25-29	47	43	90
	30-40	81	39	120
	41-50	35	29	64
	over 50	3	22	25
Total		183	176	359

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	41,026[a]	4	,000
Likelihood Ratio	43,580	4	,000
Linear-by-Linear Association	,680	1	,409
N of Valid Cases	359		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 12,26.

Bar Chart



Gender * Main group/Control group

Crosstab

Count

		Main group/Control group		
		Main group	Control group	Total
Gender	Male	94	66	160
	Female	89	108	197
Total		183	174	357

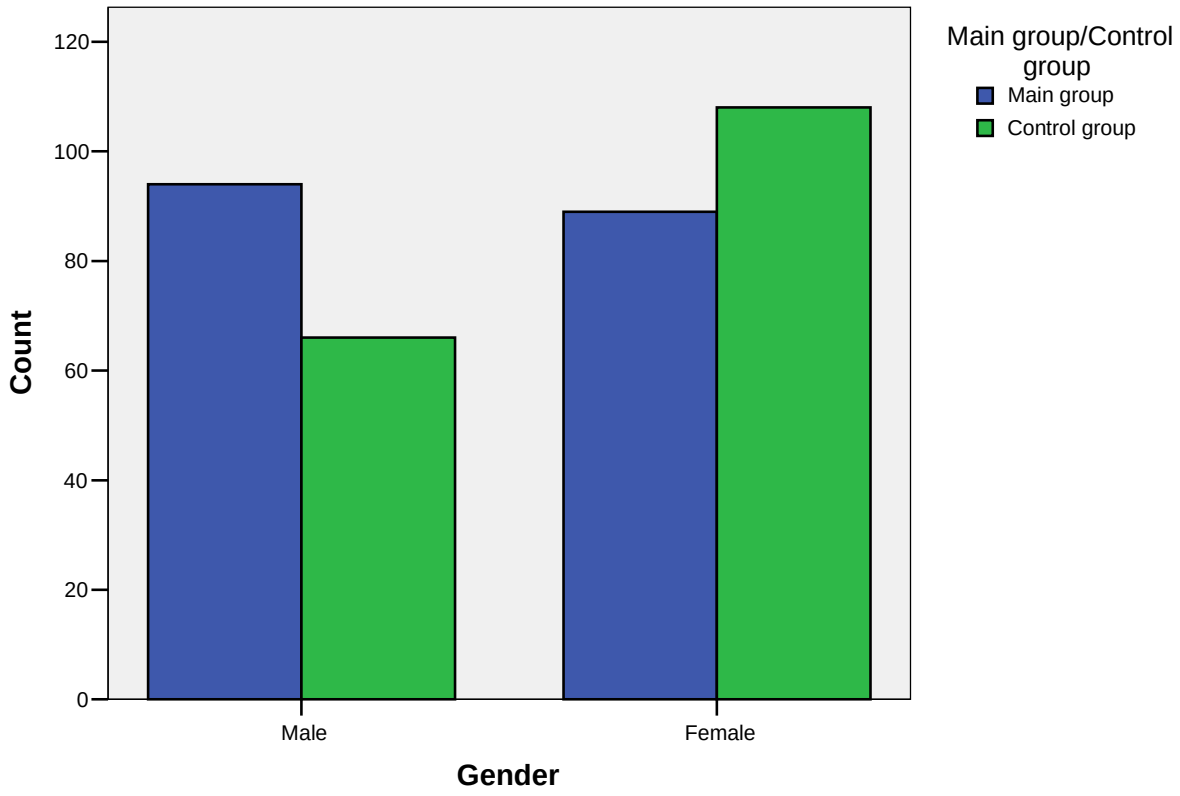
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6,510[b]	1	,011		
Continuity Correction[a]	5,978	1	,014		
Likelihood Ratio	6,534	1	,011		
Fisher's Exact Test				,014	,007
Linear-by-Linear Association	6,491	1	,011		
N of Valid Cases	357				

a. Computed only for a 2x2 table

b. 0 cells (,0%) have expected count less than 5. The minimum expected count is 77,98.

Bar Chart



What is your level of education? * Main group/Control group

Crosstab

Count

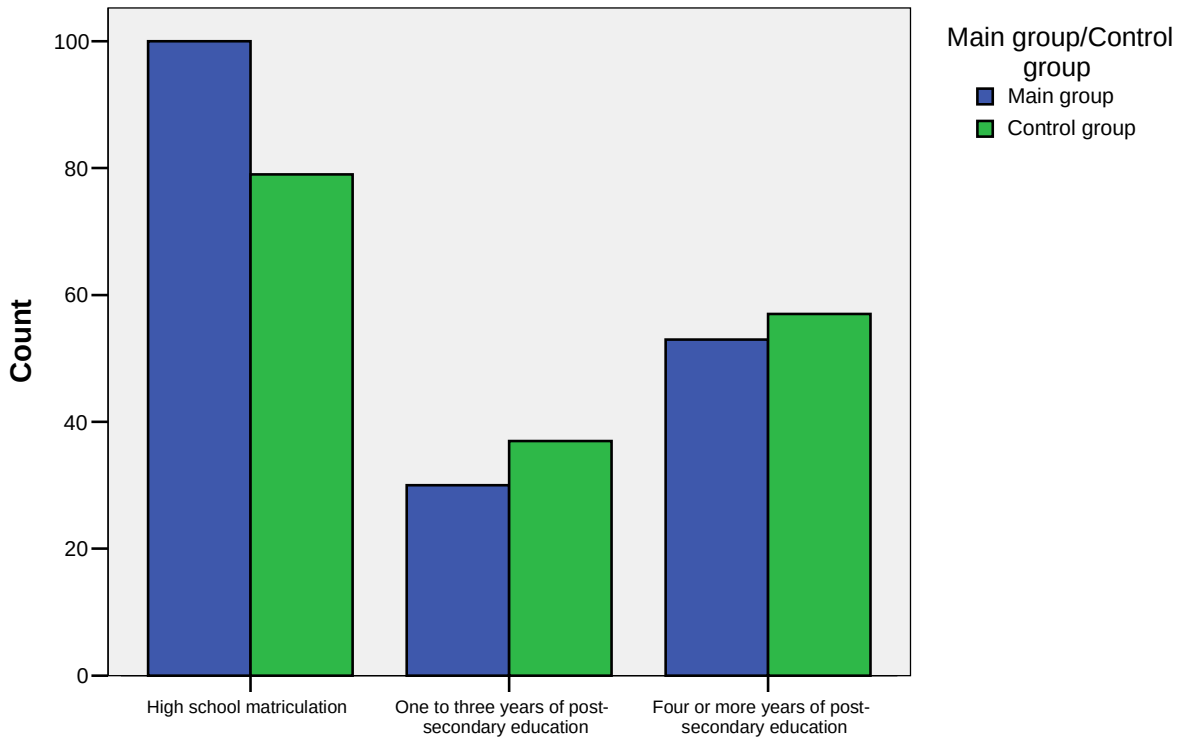
		Main group/Control group		
		Main group	Control group	Total
What is your level of education?	High school matriculation	100	79	179
	One to three years of post-secondary education	30	37	67
	Four or more years of post-secondary education	53	57	110
Total		183	173	356

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,062[a]	2	,216
Likelihood Ratio	3,067	2	,216
Linear-by-Linear Association	1,926	1	,165
N of Valid Cases	356		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 32,56.

Bar Chart



To what extent have you used advanced technological equipment in your professional life? * Main group/Control group

Crosstab

Count

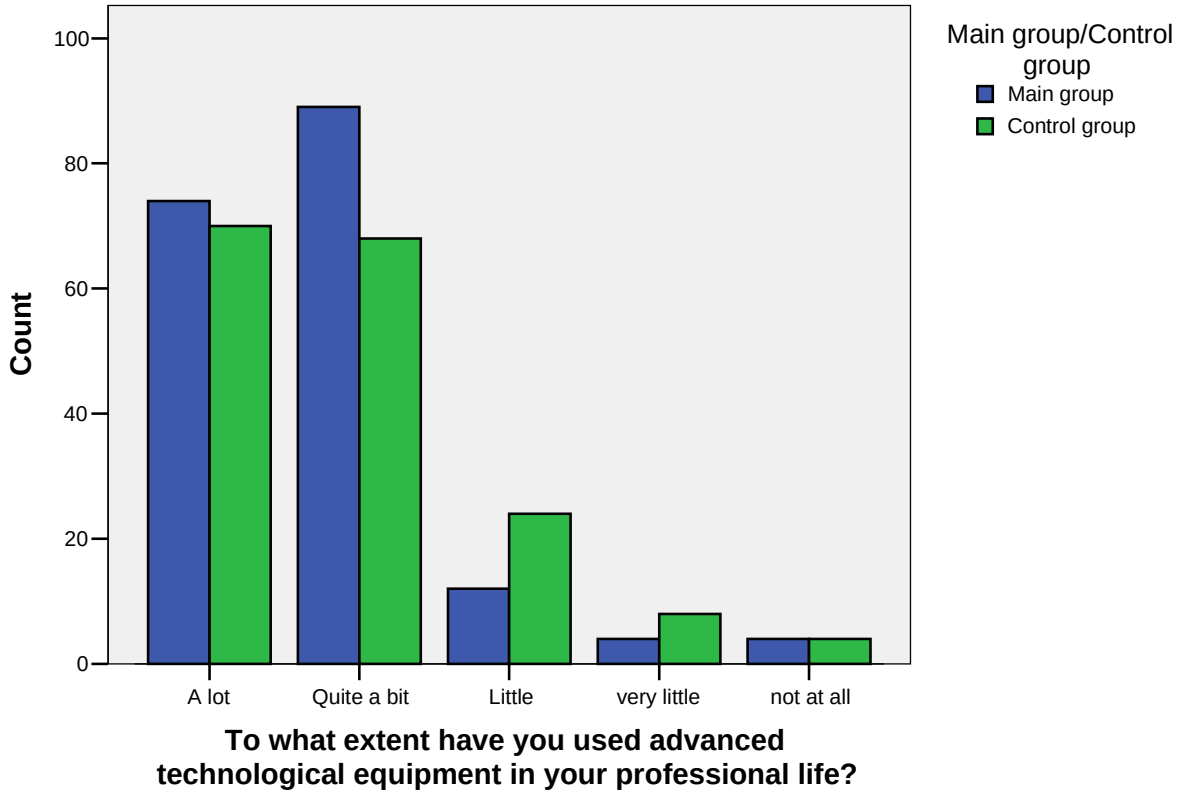
		Main group/Control group		
		Main group	Control group	Total
To what extent have you used advanced technological equipment in your professional life?	A lot	74	70	144
	Quite a bit	89	68	157
	Little	12	24	36
	very little	4	8	12
	not at all	4	4	8
Total		183	174	357

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,032[a]	4	,090
Likelihood Ratio	8,138	4	,087
Linear-by-Linear Association	1,740	1	,187
N of Valid Cases	357		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 3,90.

Bar Chart



Have you had to change your way of working because of technological developments? * Main group/Control group

Crosstab

Count

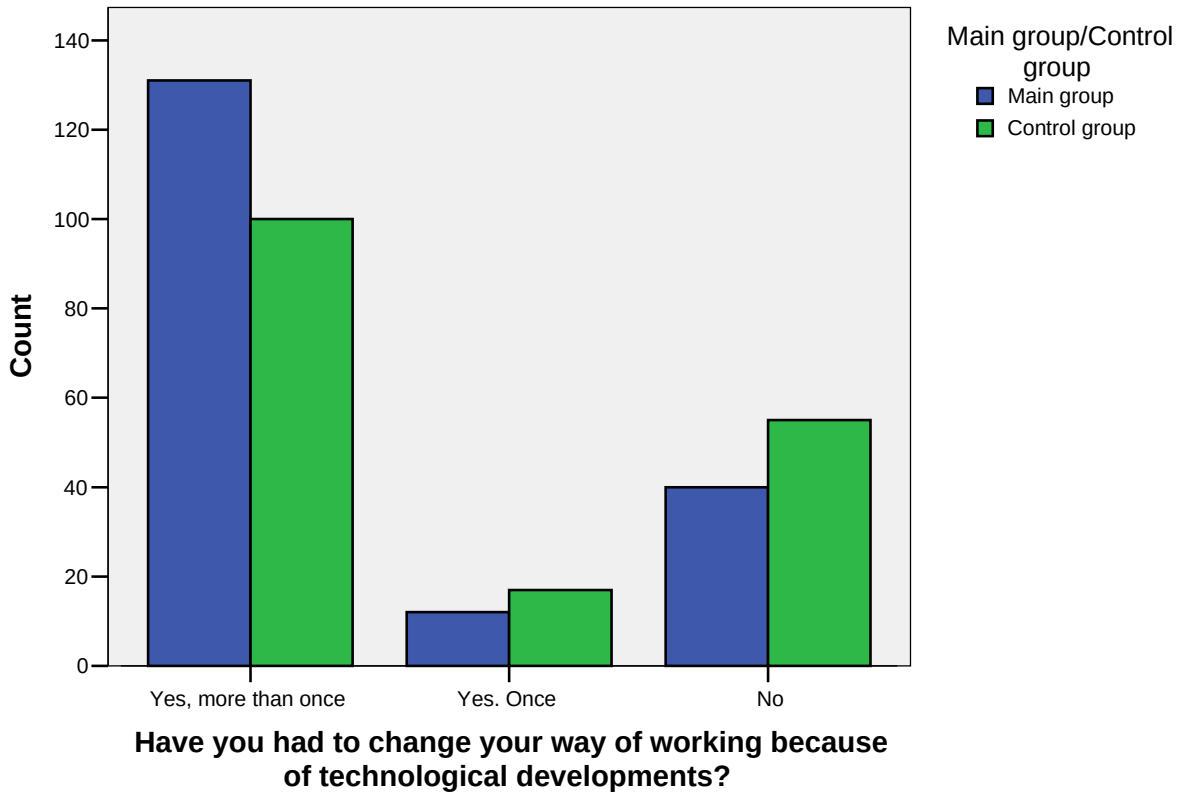
		Main group/Control group		
		Main group	Control group	Total
Have you had to change your way of working because of technological developments?	Yes, more than once	131	100	231
	Yes. Once	12	17	29
	No	40	55	95
Total		183	172	355

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7,057[a]	2	,029
Likelihood Ratio	7,077	2	,029
Linear-by-Linear Association	6,363	1	,012
N of Valid Cases	355		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 14,05.

Bar Chart



Thanks to technology, the problems of access to learning for students with disabilities have been resolved * Main group/Control group

Crosstab

Count

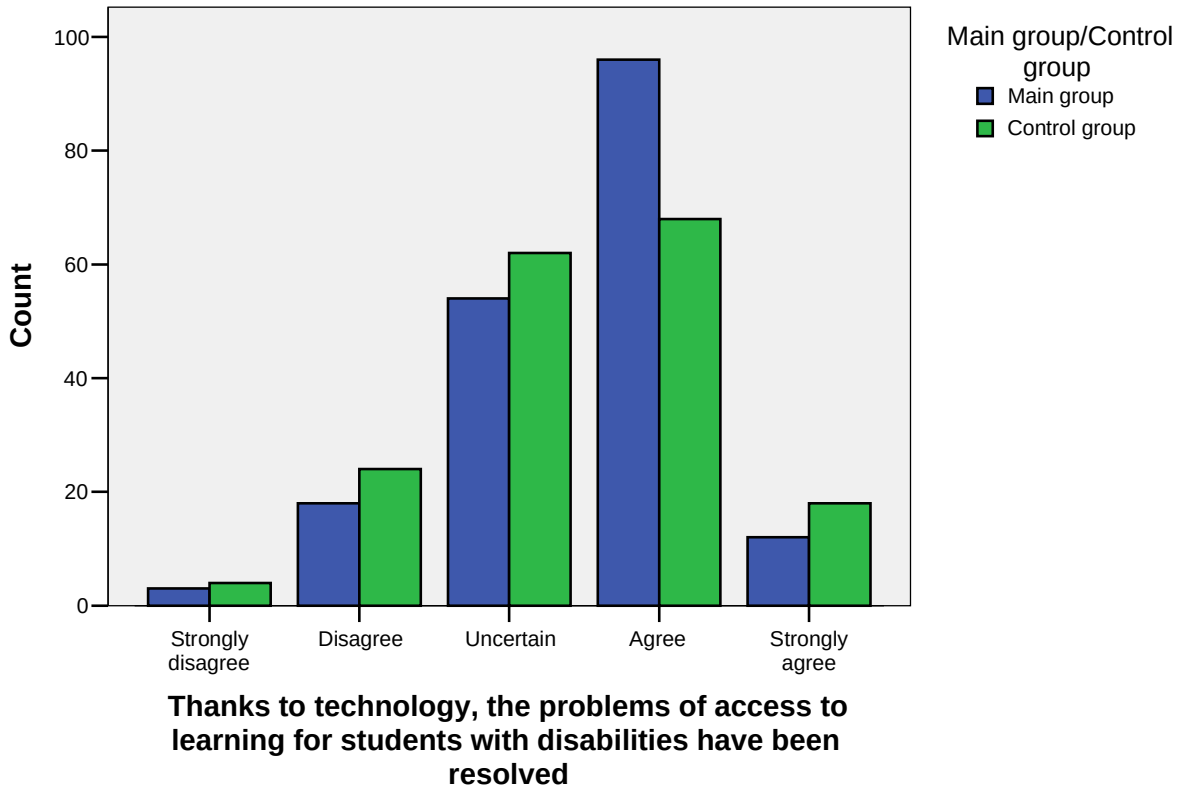
		Main group/Control group		
		Main group	Control group	Total
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	3	4	7
	Disagree	18	24	42
	Uncertain	54	62	116
	Agree	96	68	164
	Strongly agree	12	18	30
Total		183	176	359

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7,399[a]	4	,116
Likelihood Ratio	7,431	4	,115
Linear-by-Linear Association	1,556	1	,212
N of Valid Cases	359		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 3,43.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education * Main group/Control group

Crosstab

Count

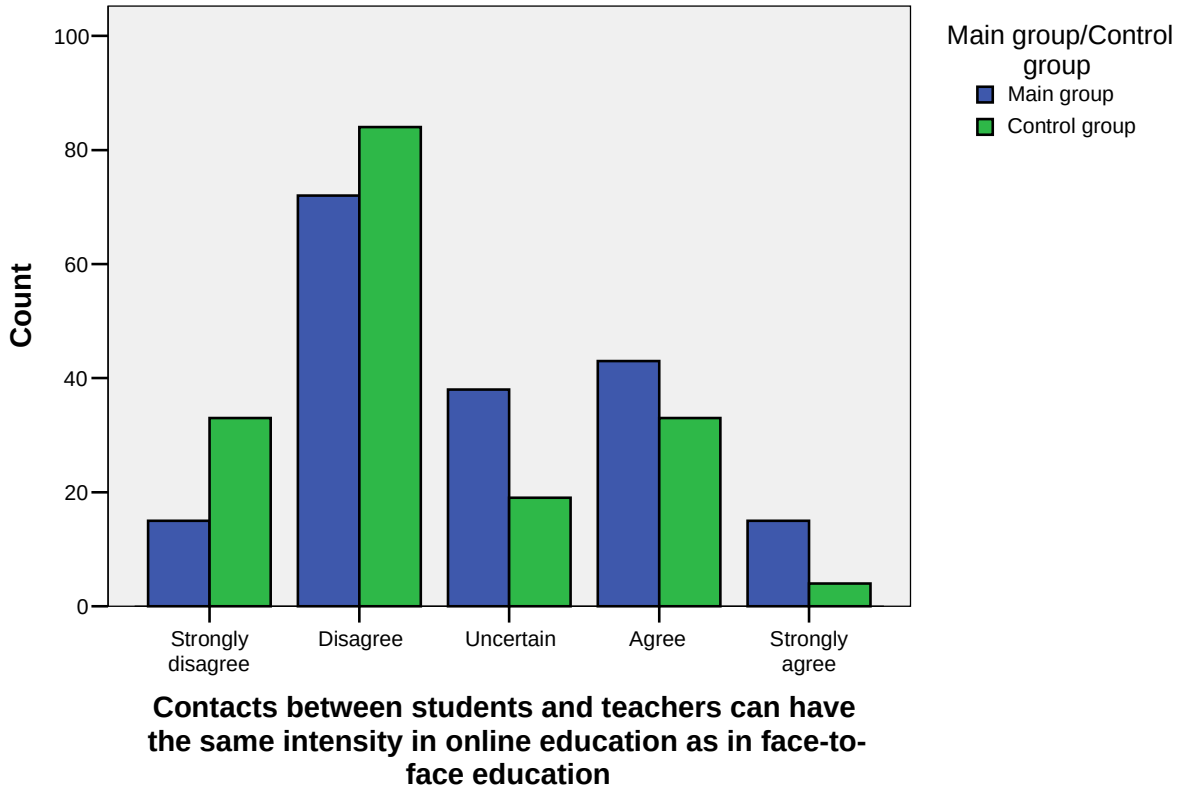
		Main group/Control group		
		Main group	Control group	Total
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	15	33	48
	Disagree	72	84	156
	Uncertain	38	19	57
	Agree	43	33	76
	Strongly agree	15	4	19
Total		183	173	356

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21,427[a]	4	,000
Likelihood Ratio	22,119	4	,000
Linear-by-Linear Association	15,724	1	,000
N of Valid Cases	356		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,23.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * Main group/Control group

Crosstab

Count

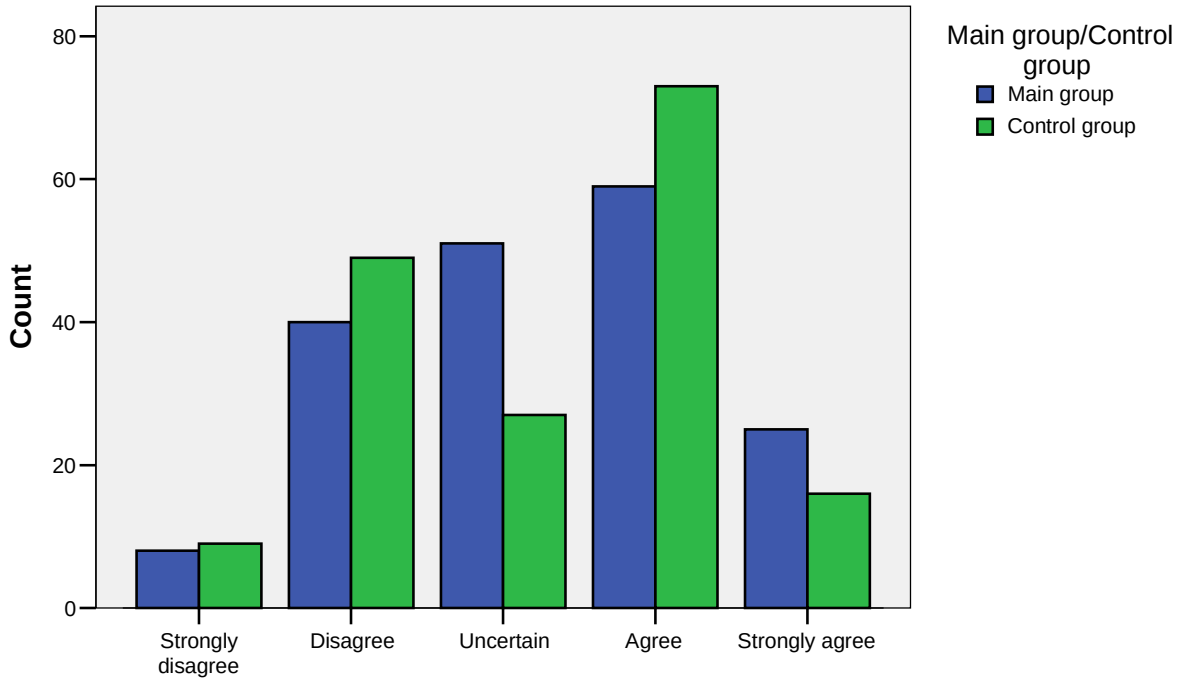
		Main group/Control group		
		Main group	Control group	Total
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	8	9	17
	Disagree	40	49	89
	Uncertain	51	27	78
	Agree	59	73	132
	Strongly agree	25	16	41
Total		183	174	357

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11,594[a]	4	,021
Likelihood Ratio	11,729	4	,019
Linear-by-Linear Association	,375	1	,540
N of Valid Cases	357		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,29.

Bar Chart



Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Only optimistic people think that the impact of technology on learning is beneficial * Main group/Control group

Crosstab

Count

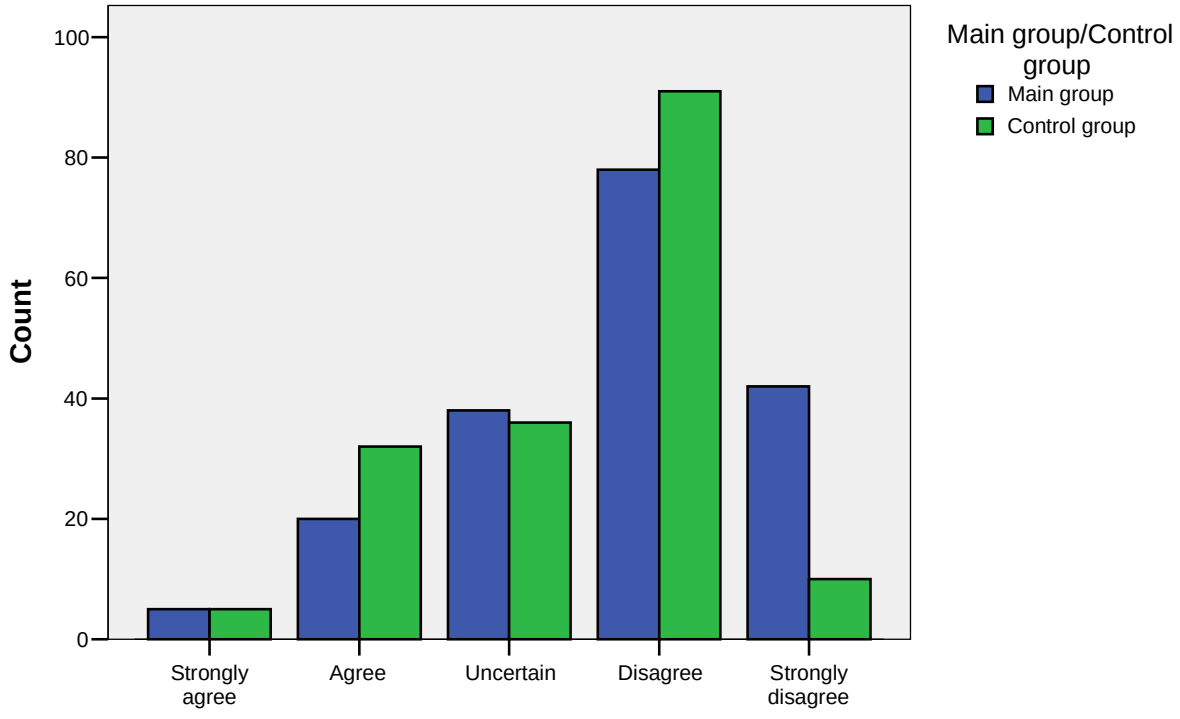
		Main group/Control group		
		Main group	Control group	Total
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	5	5	10
	Agree	20	32	52
	Uncertain	38	36	74
	Disagree	78	91	169
	Strongly disagree	42	10	52
Total		183	174	357

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23,304[a]	4	,000
Likelihood Ratio	24,796	4	,000
Linear-by-Linear Association	9,412	1	,002
N of Valid Cases	357		

a. 1 cells (10,0%) have expected count less than 5. The minimum expected count is 4,87.

Bar Chart



Only optimistic people think that the impact of technology on learning is beneficial

From my personal study experience I find that the impact of technology on learning is valuable * Main group/Control group

Crosstab

Count

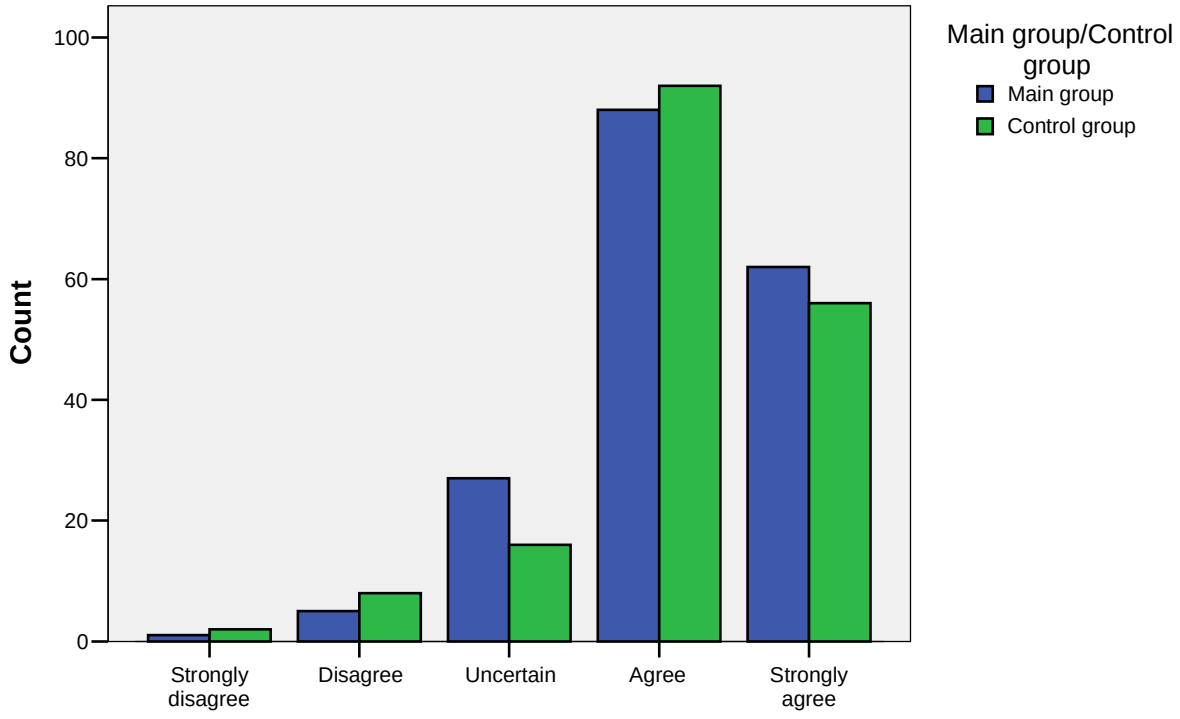
		Main group/Control group		
		Main group	Control group	Total
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	1	2	3
	Disagree	5	8	13
	Uncertain	27	16	43
	Agree	88	92	180
	Strongly agree	62	56	118
Total		183	174	357

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,009[a]	4	,405
Likelihood Ratio	4,051	4	,399
Linear-by-Linear Association	,038	1	,846
N of Valid Cases	357		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 1,46.

Bar Chart



From my personal study experience I find that the impact of technology on learning is valuable

Information and communications technology has usually been used to encourage us to be active participants in learning * Main group/Control group

Crosstab

Count

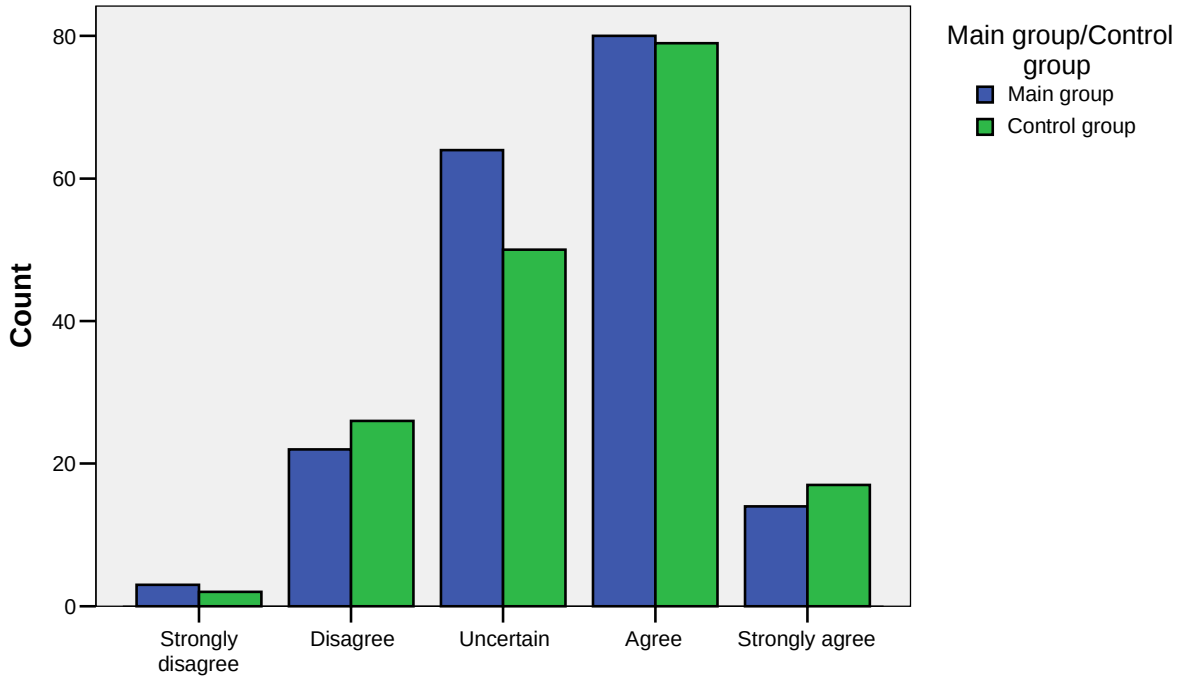
		Main group/Control group		
		Main group	Control group	Total
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	3	2	5
	Disagree	22	26	48
	Uncertain	64	50	114
	Agree	80	79	159
	Strongly agree	14	17	31
Total		183	174	357

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,324[a]	4	,676
Likelihood Ratio	2,329	4	,676
Linear-by-Linear Association	,182	1	,669
N of Valid Cases	357		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 2,44.

Bar Chart



Information and communications technology has usually been used to encourage us to be active participants in learning

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * Main group/Control group

Crosstab

Count

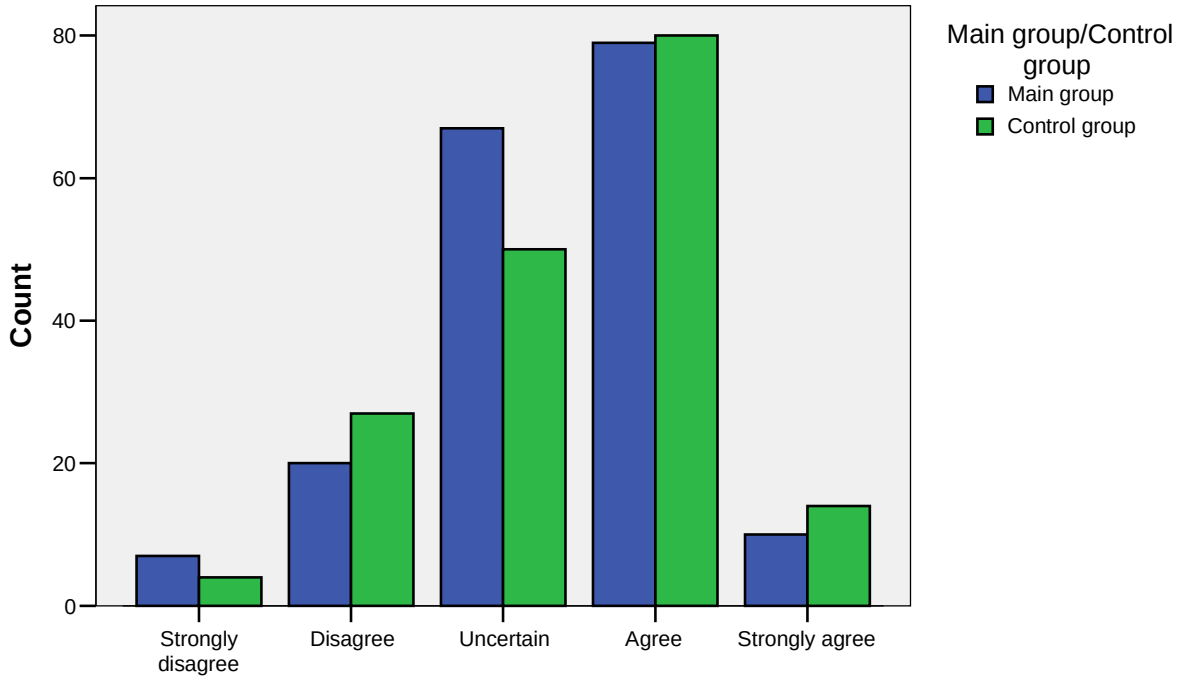
		Main group/Control group		
		Main group	Control group	Total
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	7	4	11
	Disagree	20	27	47
	Uncertain	67	50	117
	Agree	79	80	159
	Strongly agree	10	14	24
Total		183	175	358

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,827[a]	4	,305
Likelihood Ratio	4,851	4	,303
Linear-by-Linear Association	,419	1	,518
N of Valid Cases	358		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,38.

Bar Chart



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs *

Main group/Control group

Crosstab

Count

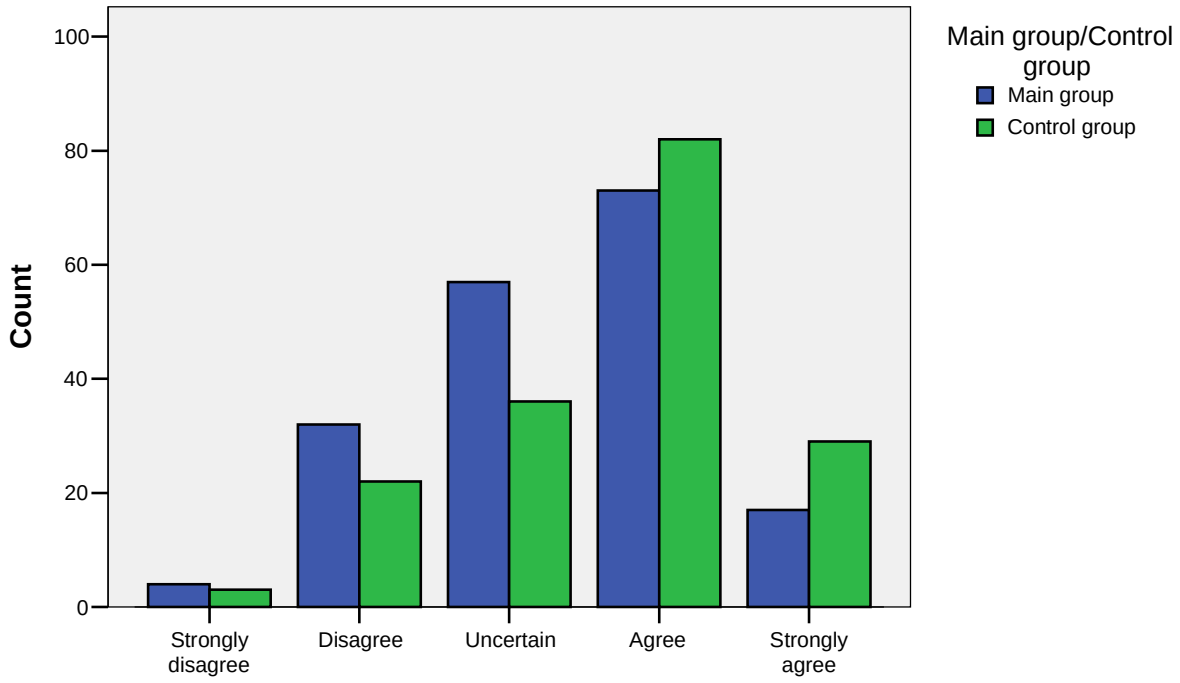
		Main group/Control group		
		Main group	Control group	Total
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	4	3	7
	Disagree	32	22	54
	Uncertain	57	36	93
	Agree	73	82	155
	Strongly agree	17	29	46
Total		183	172	355

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10,058[a]	4	,039
Likelihood Ratio	10,138	4	,038
Linear-by-Linear Association	7,710	1	,005
N of Valid Cases	355		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 3,39.

Bar Chart



Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Learning is enhanced when text and pictures are integrated in a multimedia

environment * Main group/Control group

Crosstab

Count

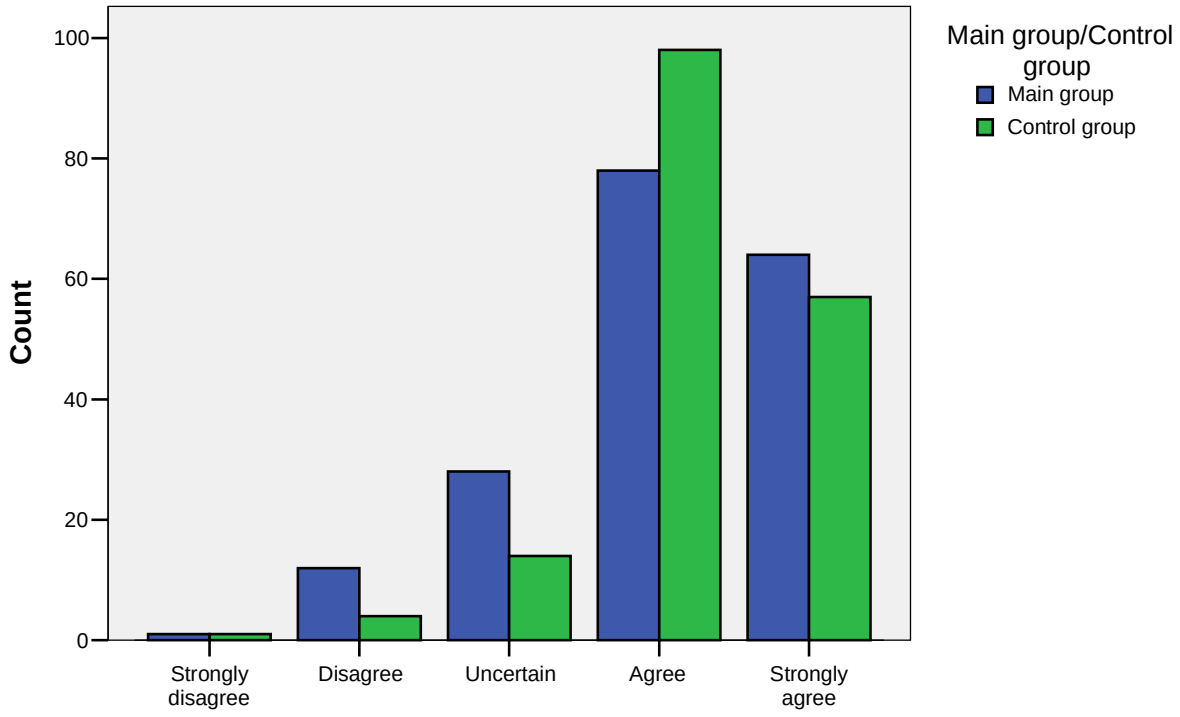
		Main group/Control group		
		Main group	Control group	Total
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	1	1	2
	Disagree	12	4	16
	Uncertain	28	14	42
	Agree	78	98	176
	Strongly agree	64	57	121
Total		183	174	357

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11,125[a]	4	,025
Likelihood Ratio	11,399	4	,022
Linear-by-Linear Association	2,399	1	,121
N of Valid Cases	357		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is ,97.

Bar Chart



Learning is enhanced when text and pictures are integrated in a multimedia environment

Educational games motivate learners and contribute to developing skills such as teamwork * Main group/Control group

Crosstab

Count

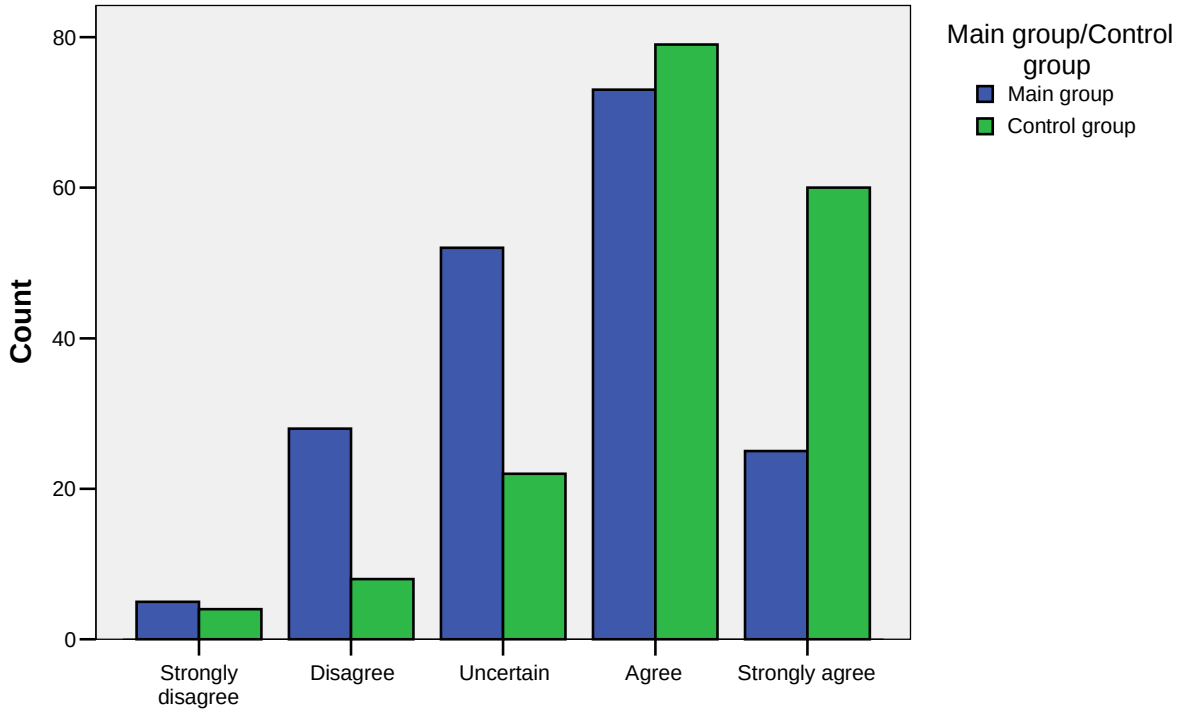
		Main group/Control group		
		Main group	Control group	Total
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	5	4	9
	Disagree	28	8	36
	Uncertain	52	22	74
	Agree	73	79	152
	Strongly agree	25	60	85
Total		183	173	356

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37,782[a]	4	,000
Likelihood Ratio	39,204	4	,000
Linear-by-Linear Association	30,680	1	,000
N of Valid Cases	356		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 4,37.

Bar Chart



Educational games motivate learners and contribute to developing skills such as teamwork

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * Main group/Control group

Crosstab

Count

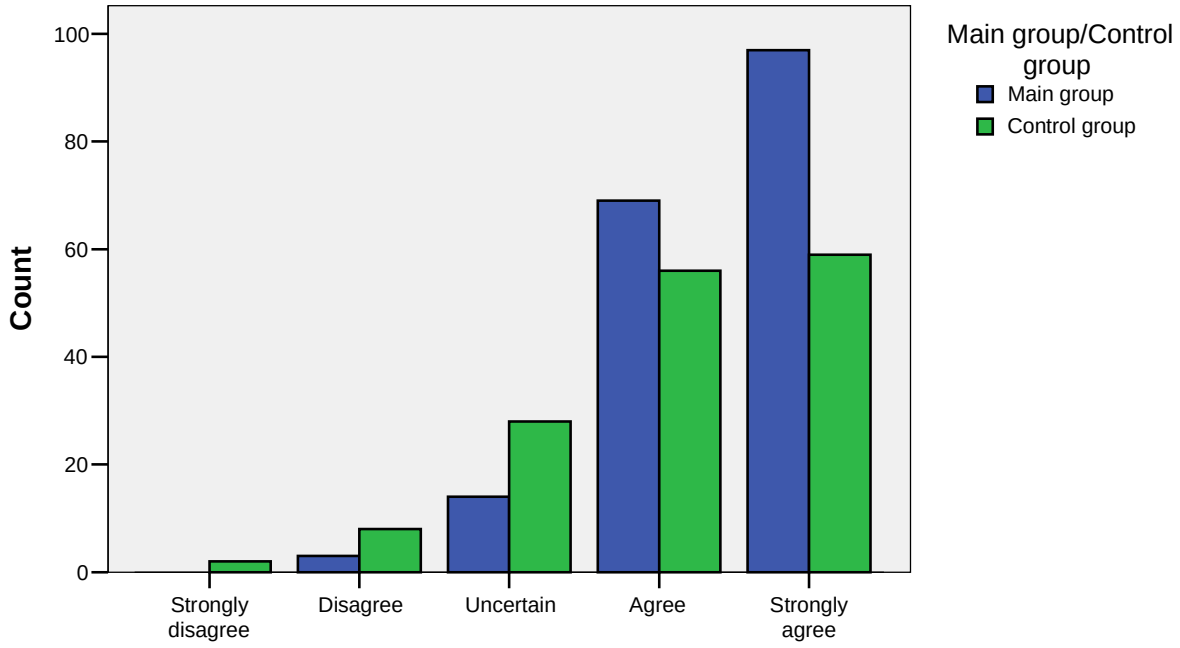
		Main group/Control group		
		Main group	Control group	Total
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	0	2	2
	Disagree	3	8	11
	Uncertain	14	28	42
	Agree	69	56	125
	Strongly agree	97	59	156
Total		183	153	336

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17,005[a]	4	,002
Likelihood Ratio	17,911	4	,001
Linear-by-Linear Association	15,366	1	,000
N of Valid Cases	336		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is ,91.

Bar Chart



The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Technology facilitates easier access to material for those studying part-time * Main group/Control group

Crosstab

Count

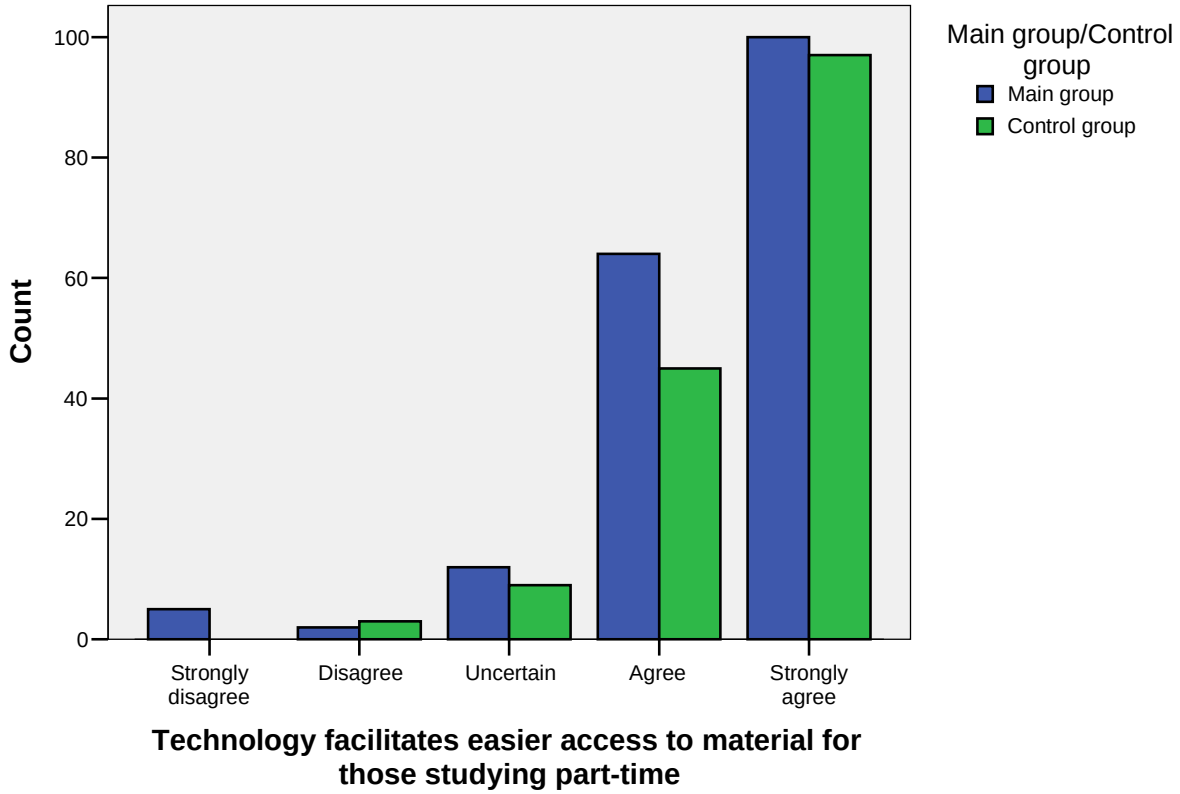
		Main group/Control group		
		Main group	Control group	Total
Technology facilitates easier access to material for those studying part-time	Strongly disagree	5	0	5
	Disagree	2	3	5
	Uncertain	12	9	21
	Agree	64	45	109
	Strongly agree	100	97	197
Total		183	154	337

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,539[a]	4	,162
Likelihood Ratio	8,439	4	,077
Linear-by-Linear Association	3,152	1	,076
N of Valid Cases	337		

a. 4 cells (40,0%) have expected count less than 5. The minimum expected count is 2,28.

Bar Chart



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * Main group/Control group

Crosstab

Count

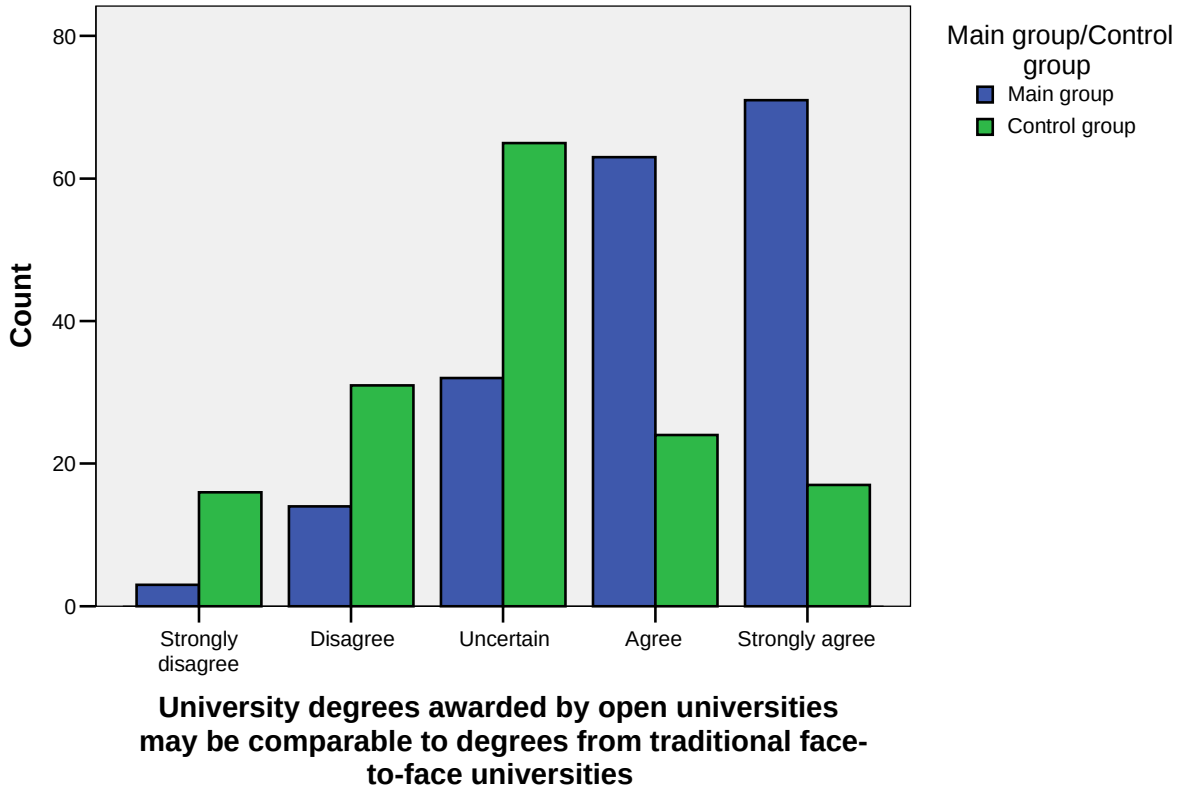
		Main group/Control group		
		Main group	Control group	Total
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	3	16	19
	Disagree	14	31	45
	Uncertain	32	65	97
	Agree	63	24	87
	Strongly agree	71	17	88
Total		183	153	336

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	75,083[a]	4	,000
Likelihood Ratio	78,855	4	,000
Linear-by-Linear Association	65,585	1	,000
N of Valid Cases	336		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,65.

Bar Chart



There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * Main group/Control group

Crosstab

Count

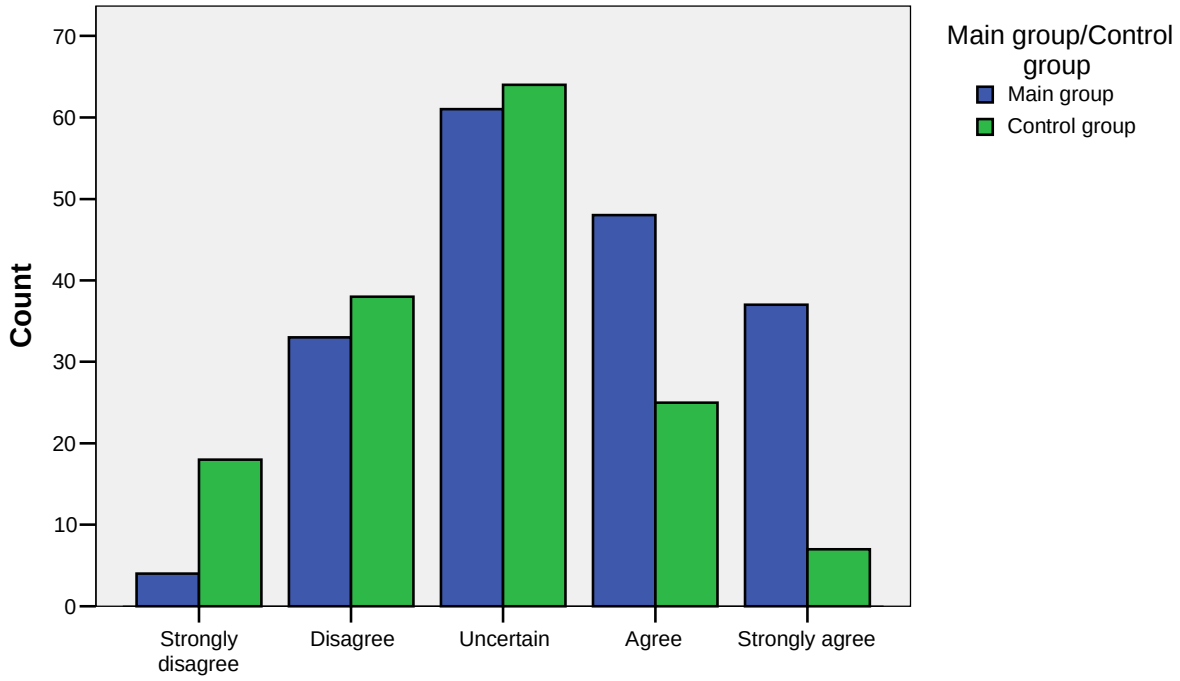
		Main group/Control group		
		Main group	Control group	Total
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	4	18	22
	Disagree	33	38	71
	Uncertain	61	64	125
	Agree	48	25	73
	Strongly agree	37	7	44
Total		183	152	335

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34,461[a]	4	,000
Likelihood Ratio	36,998	4	,000
Linear-by-Linear Association	31,260	1	,000
N of Valid Cases	335		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,98.

Bar Chart



Study at an Open University is especially of advantage to adults who have work and family obligations * Main group/Control group

Crosstab

Count

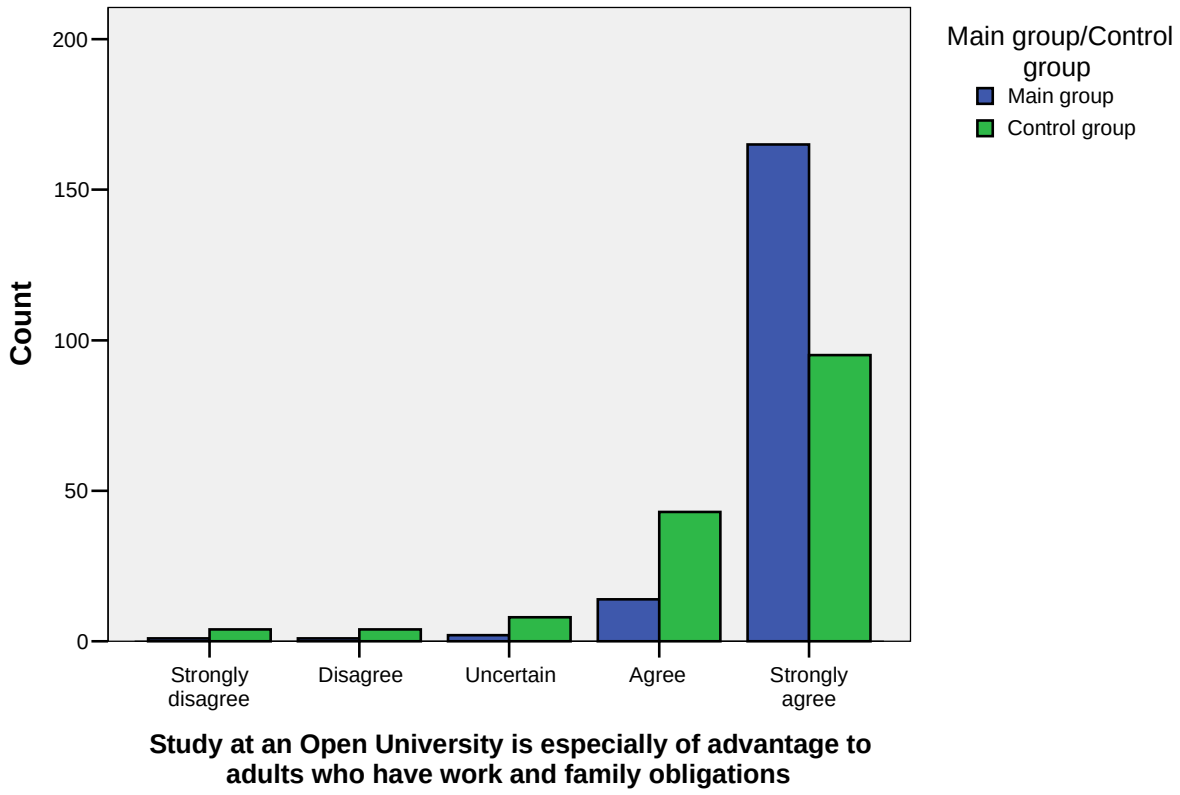
		Main group/Control group		
		Main group	Control group	Total
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	1	4	5
	Disagree	1	4	5
	Uncertain	2	8	10
	Agree	14	43	57
	Strongly agree	165	95	260
Total		183	154	337

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38,591[a]	4	,000
Likelihood Ratio	39,760	4	,000
Linear-by-Linear Association	27,898	1	,000
N of Valid Cases	337		

a. 5 cells (50,0%) have expected count less than 5. The minimum expected count is 2,28.

Bar Chart



B.4 T-Test

Main Group and Control Group differences in means

	Main group				Control group			
Item	*Valid*	*Missing*	*Mean*	*Range*	*Valid*	*Missing*	*Mean*	*Range*
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	183	0	3,52	4	176	0	3,41	4
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	183	0	2,84	4	173	3	2,37	4
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	183	0	3,29	4	174	2	3,22	4
Only optimistic people think that the impact of technology on learning is beneficial	183	0	3,72	4	174	2	3,4	4
From my personal study experience I find that the impact of technology on learning is valuable	183	0	4,12	4	174	2	4,1	4
Information and communications technology has usually been used to encourage us to be active participants in learning	183	0	3,44	4	174	2	3,48	4
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	183	0	3,36	4	175	1	3,42	4
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	183	0	3,37	4	172	4	3,65	4
Learning is enhanced when text and pictures are integrated in a multimedia environment	183	0	4,05	4	174	2	4,18	4
Educational games motivate learners and contribute to developing skills such as teamwork	183	0	3,46	4	173	3	4,06	4
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	183	0	4,42	3	153	23	4,06	4
Technology facilitates easier access to material for those studying part-time	183	0	4,38	4	154	22	4,53	3
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	183	0	4,01	4	153	23	2,97	4
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	183	0	3,44	4	152	24	2,77	4
Study at an Open University is especially of advantage to adults who have work and family obligations	183	0	4,86	4	154	22	4,44	4

Higher values in the row are in red colour.

Green rows indicate variables where, using the t-test for independent samples, we found a significant difference between main group and control group (see values in the next table).

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Thanks to technology, the problems of access to learning for students with disabilities have been	Equal variances assumed	3,271	,071	1,248	357	,213	,115	,093	-,066	,297
	Equal variances not assumed			1,245	348,483	,214	,115	,093	-,067	,298
Contacts between students and teachers can have the same intensity in online	Equal variances assumed	1,742	,188	4,051	354	,000	,472	,116	,243	,701
	Equal variances not assumed			4,056	353,993	,000	,472	,116	,243	,700
Online communication allows increased amounts of communication between	Equal variances assumed	1,025	,312	,612	355	,541	,071	,116	-,158	,300
	Equal variances not assumed			,611	353,201	,541	,071	,117	-,158	,300
Only optimistic people think that the impact of technology on learning is beneficial	Equal variances assumed	,024	,876	3,105	355	,002	,325	,105	,119	,530
	Equal variances not assumed			3,111	354,763	,002	,325	,104	,119	,530
From my personal study experience I find that the impact of technology on learning is valuable	Equal variances assumed	,102	,750	,194	355	,846	,017	,086	-,153	,186
	Equal variances not assumed			,194	351,748	,846	,017	,086	-,153	,187
Information and communications technology has usually been used to encourage	Equal variances assumed	,721	,396	-,427	355	,670	-,040	,093	-,224	,144
	Equal variances not assumed			-,426	351,561	,670	-,040	,094	-,224	,144
Information and communications technology has been used to support the	Equal variances assumed	,924	,337	-,646	356	,518	-,062	,096	-,250	,127
	Equal variances not assumed			-,646	353,559	,519	-,062	,096	-,251	,127
Information and communications technology has been used to support more	Equal variances assumed	,154	,695	-2,804	353	,005	-,285	,102	-,485	-,085
	Equal variances not assumed			-2,802	350,939	,005	-,285	,102	-,485	-,085
Learning is enhanced when text and pictures are integrated in a multimedia environment	Equal variances assumed	4,984	,026	-1,552	355	,122	-,135	,087	-,305	,036
	Equal variances not assumed			-1,560	344,860	,120	-,135	,086	-,305	,035
Educational games motivate learners and contribute to developing skills such as teamwork	Equal variances assumed	9,342	,002	-5,787	354	,000	-,593	,103	-,795	-,392
	Equal variances not assumed			-5,798	353,943	,000	-,593	,102	-,795	-,392
The application of new ICT concepts to support learning and teaching and provide Internet access to	Equal variances assumed	4,493	,035	4,007	334	,000	,362	,090	,184	,540
	Equal variances not assumed			3,906	276,045	,000	,362	,093	,180	,544
Technology facilitates easier access to material for those studying part-time	Equal variances assumed	3,148	,077	-1,781	335	,076	-,155	,087	-,327	,016
	Equal variances not assumed			-1,816	334,078	,070	-,155	,086	-,324	,013
University degrees awarded by open universities may be comparable to degrees	Equal variances assumed	,217	,642	9,017	334	,000	1,044	,116	,816	1,271
	Equal variances not assumed			8,943	311,176	,000	1,044	,117	,814	1,273
There is no difference in learning outcomes between studying at an Open University or at a	Equal variances assumed	3,501	,062	5,864	333	,000	,673	,115	,447	,899
	Equal variances not assumed			5,895	327,482	,000	,673	,114	,448	,897
Study at an Open University is especially of advantage to adults who have work and family	Equal variances assumed	68,123	,000	5,508	335	,000	,428	,078	,275	,581
	Equal variances not assumed			5,252	225,762	,000	,428	,082	,268	,589

B.5 Kreuztabelle zur Variablen Alter

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
To what extent have you used advanced technological equipment in your professional life? * What is your age grouping?	357	99,4%	2	,6%	359	100,0%
Have you had to change your way of working because of technological developments? * What is your age grouping?	355	98,9%	4	1,1%	359	100,0%
Thanks to technology, the problems of access to learning for students with disabilities have been resolved * What is your age grouping?	359	100,0%	0	,0%	359	100,0%
Contacts between students and teachers can have the same intensity in online education as in face-to-face education * What is your age grouping?	356	99,2%	3	,8%	359	100,0%
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * What is your age grouping?	357	99,4%	2	,6%	359	100,0%
Only optimistic people think that the impact of technology on learning is beneficial * What is your age grouping?	357	99,4%	2	,6%	359	100,0%
From my personal study experience I find that the impact of technology on learning is valuable * What is your age grouping?	357	99,4%	2	,6%	359	100,0%
Information and communications technology has usually been used to encourage us to be active participants in learning * What is your age grouping?	357	99,4%	2	,6%	359	100,0%
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * What is your age grouping?	358	99,7%	1	,3%	359	100,0%

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * What is your age grouping?	355	98,9%	4	1,1%	359	100,0%
Learning is enhanced when text and pictures are integrated in a multimedia environment * What is your age grouping?	357	99,4%	2	,6%	359	100,0%
Educational games motivate learners and contribute to developing skills such as teamwork * What is your age grouping?	356	99,2%	3	,8%	359	100,0%
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * What is your age grouping?	336	93,6%	23	6,4%	359	100,0%
Technology facilitates easier access to material for those studying part-time * What is your age grouping?	337	93,9%	22	6,1%	359	100,0%
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * What is your age grouping?	336	93,6%	23	6,4%	359	100,0%
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * What is your age grouping?	335	93,3%	24	6,7%	359	100,0%
Study at an Open University is especially of advantage to adults who have work and family obligations * What is your age grouping?	337	93,9%	22	6,1%	359	100,0%

To what extent have you used advanced technological equipment in your professional life? * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
To what extent have you used advanced technological equipment in your professional life?	A lot	Count	20	36	51
		Expected Count	24,2	36,3	48,0
	Quite a bit	Count	21	45	54
		Expected Count	26,4	39,6	52,3
	Little	Count	12	6	10
		Expected Count	6,1	9,1	12,0
	very little	Count	3	3	2
		Expected Count	2,0	3,0	4,0
	not at all	Count	4	0	2
		Expected Count	1,3	2,0	2,7
Total		Count	60	90	119
		Expected Count	60,0	90,0	119,0

Crosstab

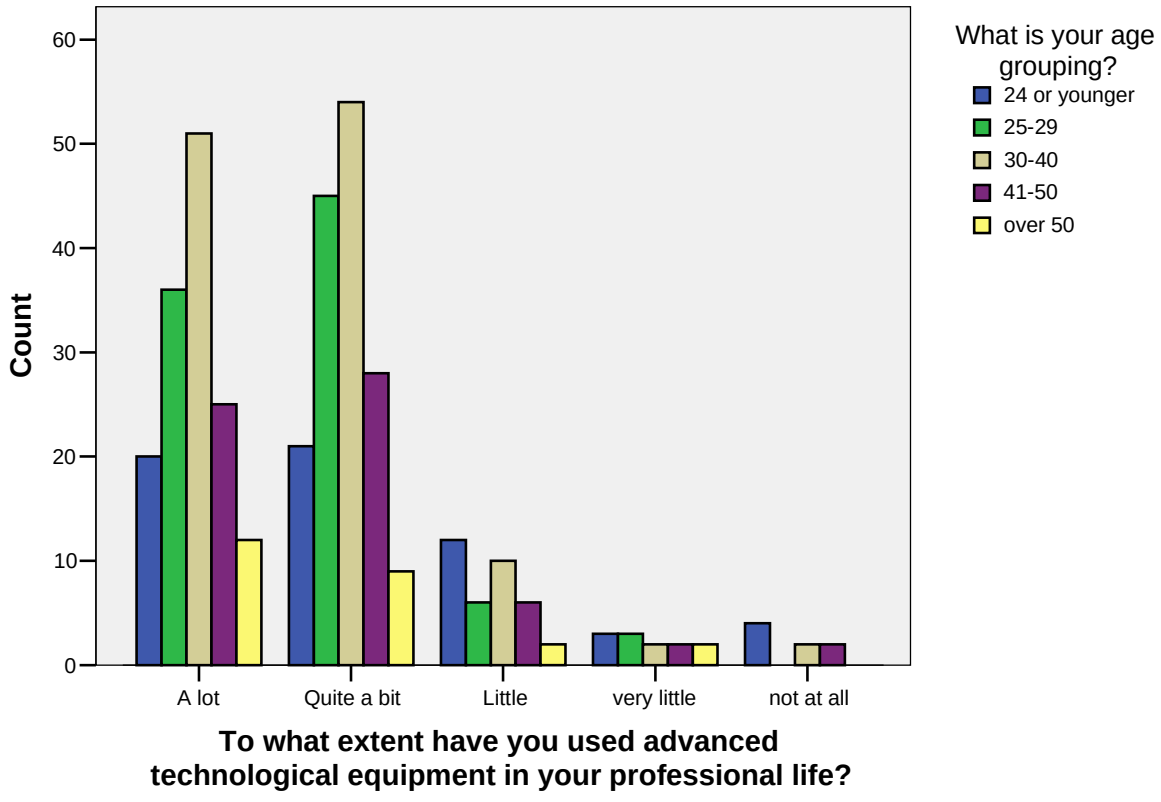
			What is your age		
			41-50	over 50	Total
To what extent have you used advanced technological equipment in your professional life?	A lot	Count	25	12	144
		Expected Count	25,4	10,1	144,0
	Quite a bit	Count	28	9	157
		Expected Count	27,7	11,0	157,0
	Little	Count	6	2	36
		Expected Count	6,4	2,5	36,0
	very little	Count	2	2	12
		Expected Count	2,1	,8	12,0
	not at all	Count	2	0	8
		Expected Count	1,4	,6	8,0
Total		Count	63	25	357
		Expected Count	63,0	25,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22,223[a]	16	,136
Likelihood Ratio	21,621	16	,156
Linear-by-Linear Association	2,918	1	,088
N of Valid Cases	357		

a. 11 cells (44,0%) have expected count less than 5. The minimum expected count is ,56.

Bar Chart



Have you had to change your way of working because of technological developments? * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Have you had to change your way of working because of technological developments?	Yes, more than once	Count	31	51	81
		Expected Count	39,0	58,6	76,8
	Yes. Once	Count	3	9	8
		Expected Count	4,9	7,4	9,6
	No	Count	26	30	29
		Expected Count	16,1	24,1	31,6
Total		Count	60	90	118
		Expected Count	60,0	90,0	118,0

Crosstab

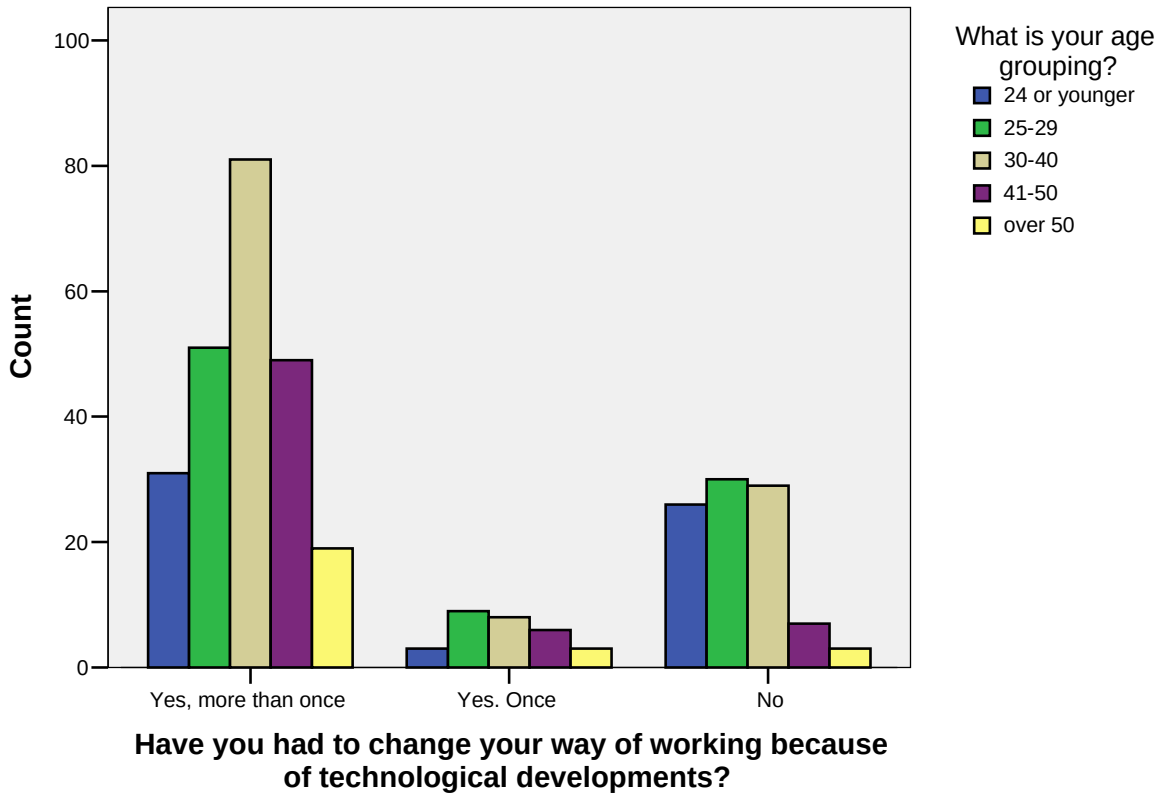
			What is your age		
			41-50	over 50	Total
Have you had to change your way of working because of technological developments?	Yes, more than once	Count	49	19	231
		Expected Count	40,3	16,3	231,0
	Yes. Once	Count	6	3	29
		Expected Count	5,1	2,0	29,0
	No	Count	7	3	95
		Expected Count	16,6	6,7	95,0
Total		Count	62	25	355
		Expected Count	62,0	25,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22,591[a]	8	,004
Likelihood Ratio	23,667	8	,003
Linear-by-Linear Association	18,033	1	,000
N of Valid Cases	355		

a. 2 cells (13,3%) have expected count less than 5. The minimum expected count is 2,04.

Bar Chart



Thanks to technology, the problems of access to learning for students with disabilities have been resolved * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	Count	2	0	2
		Expected Count	1,2	1,8	2,3
	Disagree	Count	14	4	16
		Expected Count	7,0	10,5	14,0
	Uncertain	Count	13	35	35
		Expected Count	19,4	29,1	38,8
	Agree	Count	28	44	56
		Expected Count	27,4	41,1	54,8
	Strongly agree	Count	3	7	11
		Expected Count	5,0	7,5	10,0
Total		Count	60	90	120
		Expected Count	60,0	90,0	120,0

Crosstab

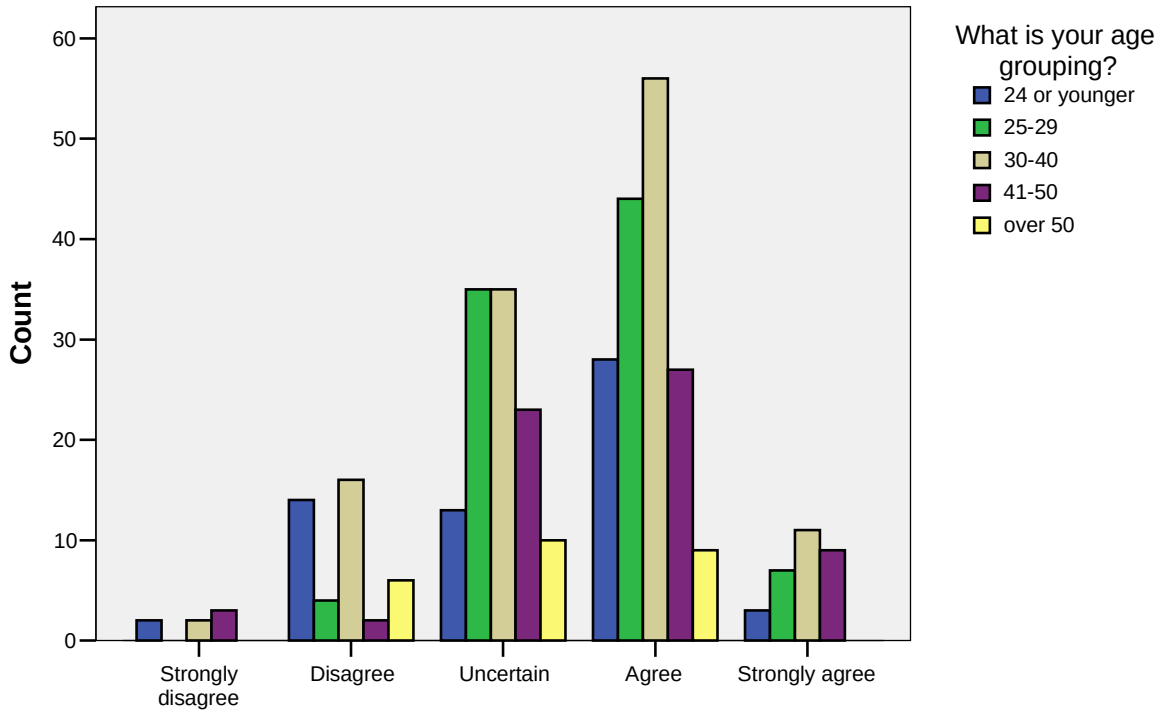
			What is your age		
			41-50	over 50	Total
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	Count	3	0	7
		Expected Count	1,2	,5	7,0
	Disagree	Count	2	6	42
		Expected Count	7,5	2,9	42,0
	Uncertain	Count	23	10	116
		Expected Count	20,7	8,1	116,0
	Agree	Count	27	9	164
		Expected Count	29,2	11,4	164,0
	Strongly agree	Count	9	0	30
		Expected Count	5,3	2,1	30,0
Total		Count	64	25	359
		Expected Count	64,0	25,0	359,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34,701[a]	16	,004
Likelihood Ratio	38,746	16	,001
Linear-by-Linear Association	,010	1	,919
N of Valid Cases	359		

a. 7 cells (28,0%) have expected count less than 5. The minimum expected count is ,49.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	Count	10	16	13
		Expected Count	8,0	12,0	16,0
	Disagree	Count	24	44	52
		Expected Count	25,9	39,0	52,1
	Uncertain	Count	8	13	22
		Expected Count	9,4	14,3	19,1
	Agree	Count	14	11	26
		Expected Count	12,6	19,0	25,4
	Strongly agree	Count	3	5	6
		Expected Count	3,1	4,8	6,4
Total		Count	59	89	119
		Expected Count	59,0	89,0	119,0

Crosstab

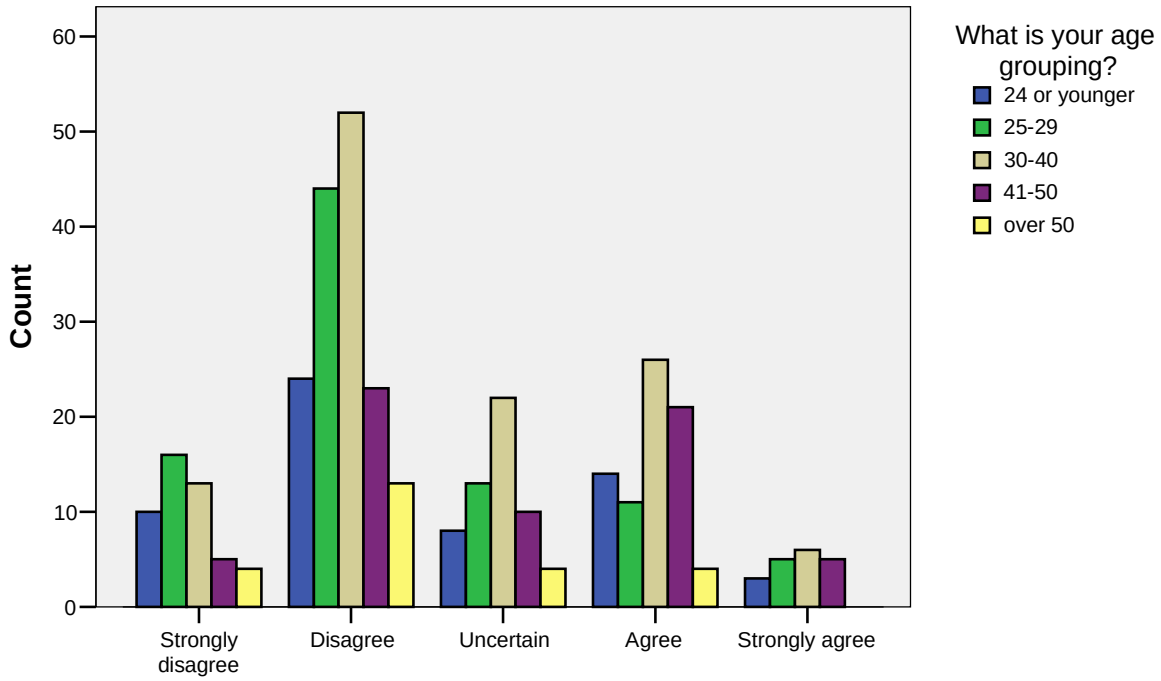
			What is your age		
			41-50	over 50	Total
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	Count	5	4	48
		Expected Count	8,6	3,4	48,0
	Disagree	Count	23	13	156
		Expected Count	28,0	11,0	156,0
	Uncertain	Count	10	4	57
		Expected Count	10,2	4,0	57,0
	Agree	Count	21	4	76
		Expected Count	13,7	5,3	76,0
	Strongly agree	Count	5	0	19
		Expected Count	3,4	1,3	19,0
Total		Count	64	25	356
		Expected Count	64,0	25,0	356,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16,860[a]	16	,395
Likelihood Ratio	18,325	16	,305
Linear-by-Linear Association	1,639	1	,200
N of Valid Cases	356		

a. 6 cells (24,0%) have expected count less than 5. The minimum expected count is 1,33.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	Count	3	6	5
		Expected Count	2,9	4,2	5,7
	Disagree	Count	20	24	27
		Expected Count	15,0	21,9	29,9
	Uncertain	Count	12	19	28
		Expected Count	13,1	19,2	26,2
	Agree	Count	14	28	49
		Expected Count	22,2	32,5	44,4
	Strongly agree	Count	11	11	11
		Expected Count	6,9	10,1	13,8
Total		Count	60	88	120
		Expected Count	60,0	88,0	120,0

Crosstab

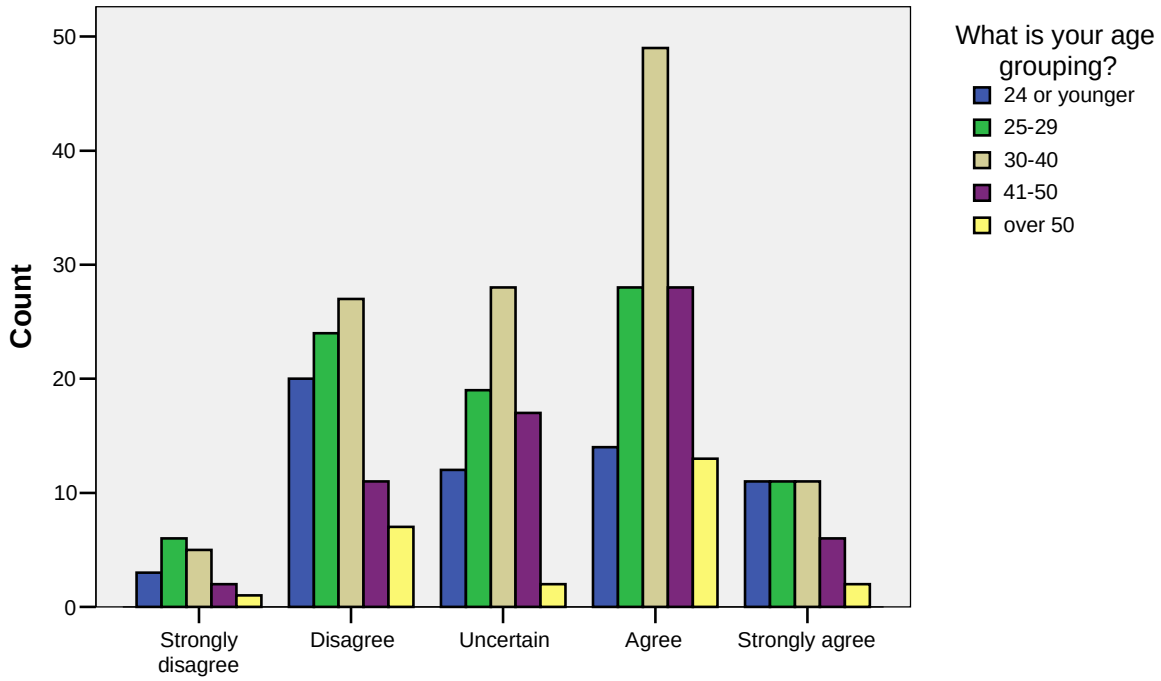
			What is your age		
			41-50	over 50	Total
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	Count	2	1	17
		Expected Count	3,0	1,2	17,0
	Disagree	Count	11	7	89
		Expected Count	16,0	6,2	89,0
	Uncertain	Count	17	2	78
		Expected Count	14,0	5,5	78,0
	Agree	Count	28	13	132
		Expected Count	23,7	9,2	132,0
	Strongly agree	Count	6	2	41
		Expected Count	7,4	2,9	41,0
Total		Count	64	25	357
		Expected Count	64,0	25,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18,202[a]	16	,312
Likelihood Ratio	18,828	16	,278
Linear-by-Linear Association	1,699	1	,192
N of Valid Cases	357		

a. 5 cells (20,0%) have expected count less than 5. The minimum expected count is 1,19.

Bar Chart



Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Only optimistic people think that the impact of technology on learning is beneficial * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	Count	3	1	2
		Expected Count	1,7	2,5	3,4
	Agree	Count	13	10	16
		Expected Count	8,7	13,0	17,5
	Uncertain	Count	6	28	21
		Expected Count	12,4	18,4	24,9
	Disagree	Count	27	42	58
		Expected Count	28,4	42,1	56,8
	Strongly disagree	Count	11	8	23
		Expected Count	8,7	13,0	17,5
Total		Count	60	89	120
		Expected Count	60,0	89,0	120,0

Crosstab

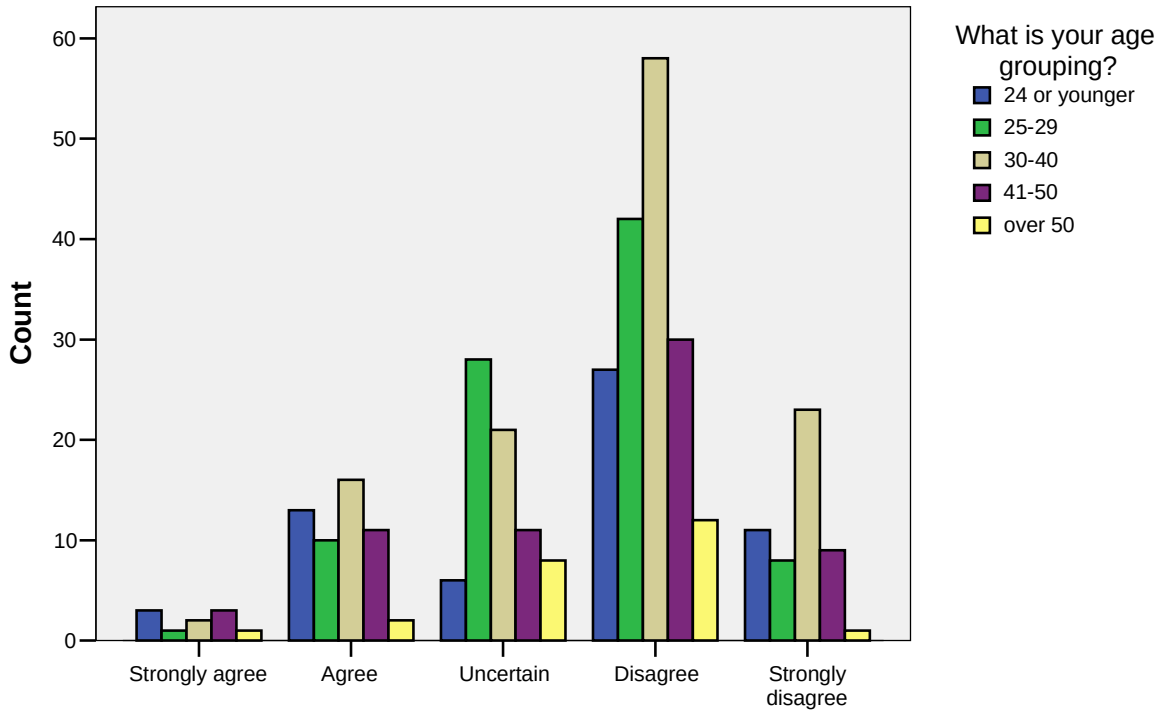
			What is your age		
			41-50	over 50	Total
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	Count	3	1	10
		Expected Count	1,8	,7	10,0
	Agree	Count	11	2	52
		Expected Count	9,3	3,5	52,0
	Uncertain	Count	11	8	74
		Expected Count	13,3	5,0	74,0
	Disagree	Count	30	12	169
		Expected Count	30,3	11,4	169,0
	Strongly disagree	Count	9	1	52
		Expected Count	9,3	3,5	52,0
Total		Count	64	24	357
		Expected Count	64,0	24,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,539[a]	16	,078
Likelihood Ratio	25,118	16	,068
Linear-by-Linear Association	,000	1	,986
N of Valid Cases	357		

a. 8 cells (32,0%) have expected count less than 5. The minimum expected count is ,67.

Bar Chart



Only optimistic people think that the impact of technology on learning is beneficial

From my personal study experience I find that the impact of technology on learning is valuable * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	Count	2	0	0
		Expected Count	,5	,8	1,0
	Disagree	Count	3	4	3
		Expected Count	2,2	3,3	4,3
	Uncertain	Count	8	16	13
		Expected Count	7,2	10,8	14,2
	Agree	Count	25	41	61
		Expected Count	30,3	45,4	59,5
	Strongly agree	Count	22	29	41
		Expected Count	19,8	29,7	39,0
Total		Count	60	90	118
		Expected Count	60,0	90,0	118,0

Crosstab

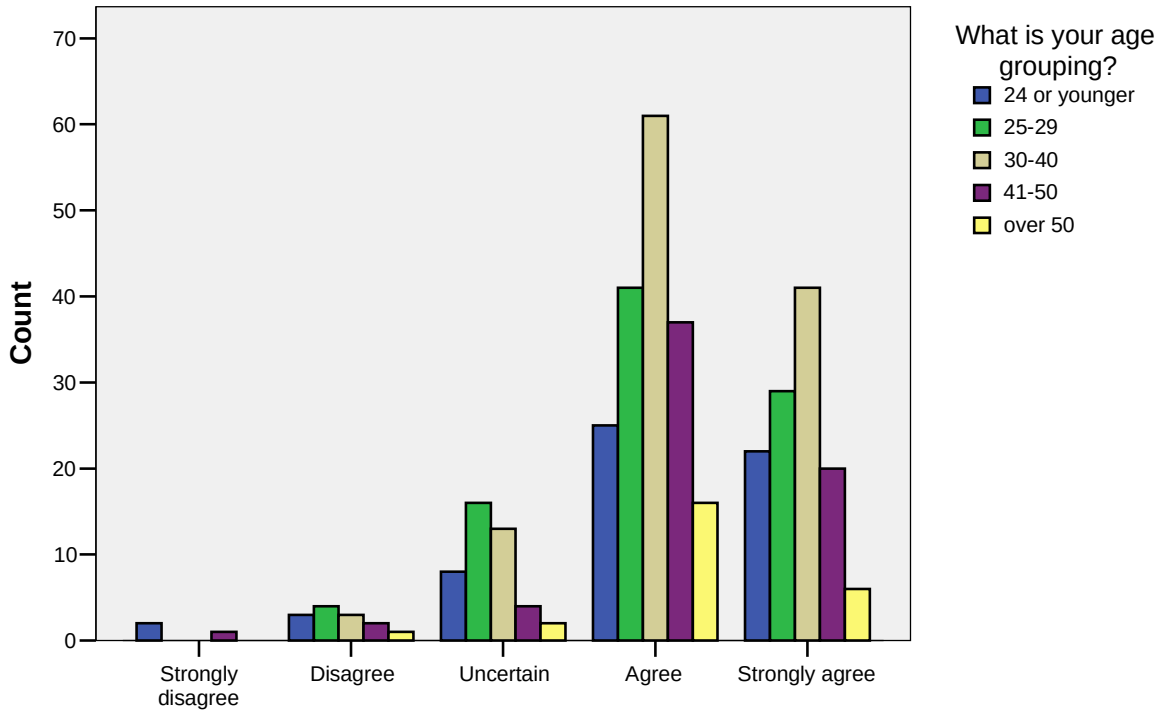
			What is your age		
			41-50	over 50	Total
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	Count	1	0	3
		Expected Count	,5	,2	3,0
	Disagree	Count	2	1	13
		Expected Count	2,3	,9	13,0
	Uncertain	Count	4	2	43
		Expected Count	7,7	3,0	43,0
	Agree	Count	37	16	180
		Expected Count	32,3	12,6	180,0
	Strongly agree	Count	20	6	118
		Expected Count	21,2	8,3	118,0
Total		Count	64	25	357
		Expected Count	64,0	25,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16,490[a]	16	,419
Likelihood Ratio	16,595	16	,412
Linear-by-Linear Association	,703	1	,402
N of Valid Cases	357		

a. 11 cells (44,0%) have expected count less than 5. The minimum expected count is ,21.

Bar Chart



From my personal study experience I find that the impact of technology on learning is valuable

Information and communications technology has usually been used to encourage us to be active participants in learning * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	Count	0	2	3
		Expected Count	,8	1,2	1,7
	Disagree	Count	6	15	13
		Expected Count	8,1	12,0	16,0
	Uncertain	Count	18	27	41
		Expected Count	19,2	28,4	38,0
	Agree	Count	22	41	55
		Expected Count	26,7	39,6	53,0
	Strongly agree	Count	14	4	7
		Expected Count	5,2	7,7	10,3
Total		Count	60	89	119
		Expected Count	60,0	89,0	119,0

Crosstab

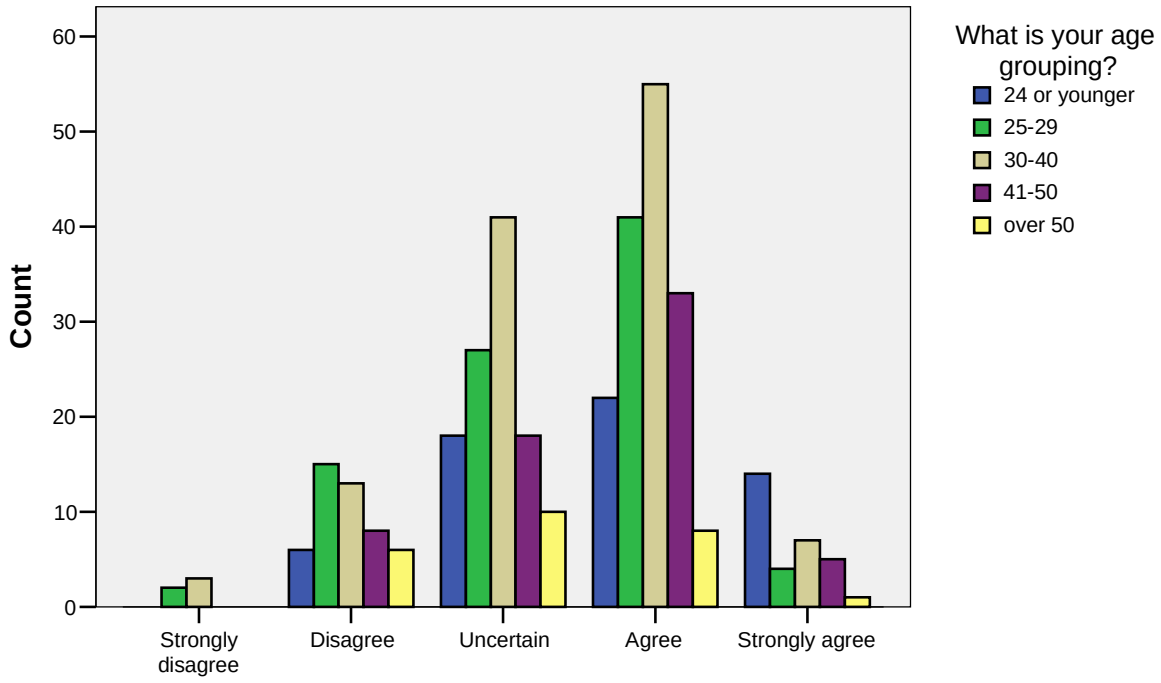
			What is your age		
			41-50	over 50	Total
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	Count	0	0	5
		Expected Count	,9	,4	5,0
	Disagree	Count	8	6	48
		Expected Count	8,6	3,4	48,0
	Uncertain	Count	18	10	114
		Expected Count	20,4	8,0	114,0
	Agree	Count	33	8	159
		Expected Count	28,5	11,1	159,0
	Strongly agree	Count	5	1	31
		Expected Count	5,6	2,2	31,0
Total		Count	64	25	357
		Expected Count	64,0	25,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29,701[a]	16	,020
Likelihood Ratio	27,192	16	,039
Linear-by-Linear Association	2,752	1	,097
N of Valid Cases	357		

a. 7 cells (28,0%) have expected count less than 5. The minimum expected count is ,35.

Bar Chart



Information and communications technology has usually been used to encourage us to be active participants in learning

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	Count	1	2	3
		Expected Count	1,8	2,7	3,7
	Disagree	Count	4	11	15
		Expected Count	7,9	11,7	15,8
	Uncertain	Count	8	33	47
		Expected Count	19,6	29,1	39,2
	Agree	Count	37	39	50
		Expected Count	26,6	39,5	53,3
	Strongly agree	Count	10	4	5
		Expected Count	4,0	6,0	8,0
Total		Count	60	89	120
		Expected Count	60,0	89,0	120,0

Crosstab

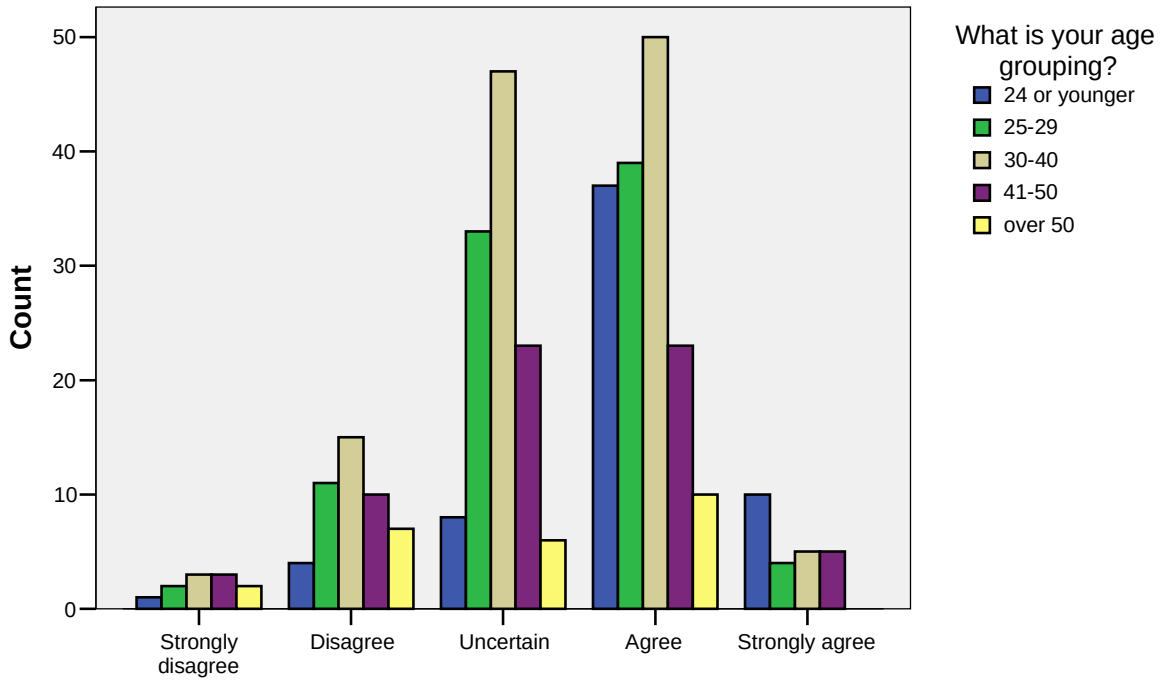
			What is your age		
			41-50	over 50	Total
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	Count	3	2	11
		Expected Count	2,0	,8	11,0
	Disagree	Count	10	7	47
		Expected Count	8,4	3,3	47,0
	Uncertain	Count	23	6	117
		Expected Count	20,9	8,2	117,0
	Agree	Count	23	10	159
		Expected Count	28,4	11,1	159,0
	Strongly agree	Count	5	0	24
		Expected Count	4,3	1,7	24,0
Total		Count	64	25	358
		Expected Count	64,0	25,0	358,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37,312[a]	16	,002
Likelihood Ratio	36,990	16	,002
Linear-by-Linear Association	17,688	1	,000
N of Valid Cases	358		

a. 9 cells (36,0%) have expected count less than 5. The minimum expected count is ,77.

Bar Chart



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	Count	0	3	3
		Expected Count	1,2	1,8	2,3
	Disagree	Count	8	15	19
		Expected Count	9,0	13,5	18,1
	Uncertain	Count	8	24	35
		Expected Count	15,5	23,3	31,2
	Agree	Count	26	36	52
		Expected Count	25,8	38,9	52,0
	Strongly agree	Count	17	11	10
		Expected Count	7,6	11,5	15,4
Total		Count	59	89	119
		Expected Count	59,0	89,0	119,0

Crosstab

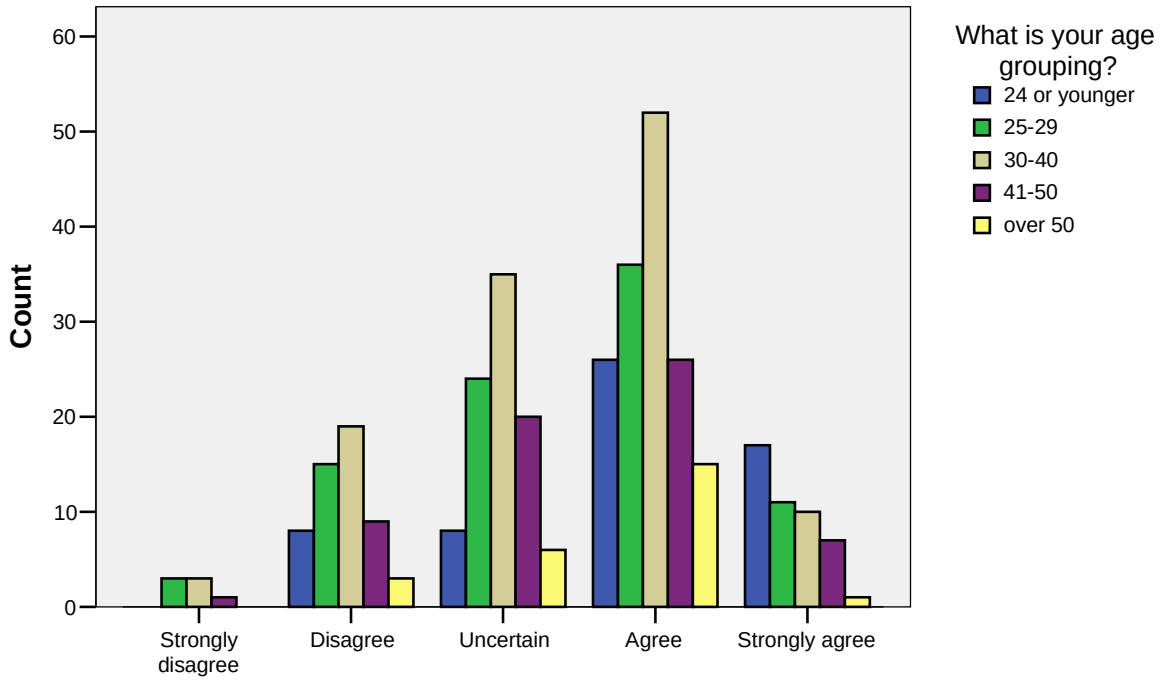
			What is your age		
			41-50	over 50	Total
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	Count	1	0	7
		Expected Count	1,2	,5	7,0
	Disagree	Count	9	3	54
		Expected Count	9,6	3,8	54,0
	Uncertain	Count	20	6	93
		Expected Count	16,5	6,5	93,0
	Agree	Count	26	15	155
		Expected Count	27,5	10,9	155,0
	Strongly agree	Count	7	1	46
		Expected Count	8,2	3,2	46,0
Total		Count	63	25	355
		Expected Count	63,0	25,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25,069[a]	16	,069
Likelihood Ratio	25,006	16	,070
Linear-by-Linear Association	3,096	1	,078
N of Valid Cases	355		

a. 7 cells (28,0%) have expected count less than 5. The minimum expected count is ,49.

Bar Chart



Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Learning is enhanced when text and pictures are integrated in a multimedia environment * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	Count	0	1	0
		Expected Count	,3	,5	,7
	Disagree	Count	2	3	6
		Expected Count	2,6	4,0	5,4
	Uncertain	Count	3	11	16
		Expected Count	6,9	10,5	14,1
	Agree	Count	28	43	60
		Expected Count	29,1	43,9	59,2
	Strongly agree	Count	26	31	38
		Expected Count	20,0	30,2	40,7
Total		Count	59	89	120
		Expected Count	59,0	89,0	120,0

Crosstab

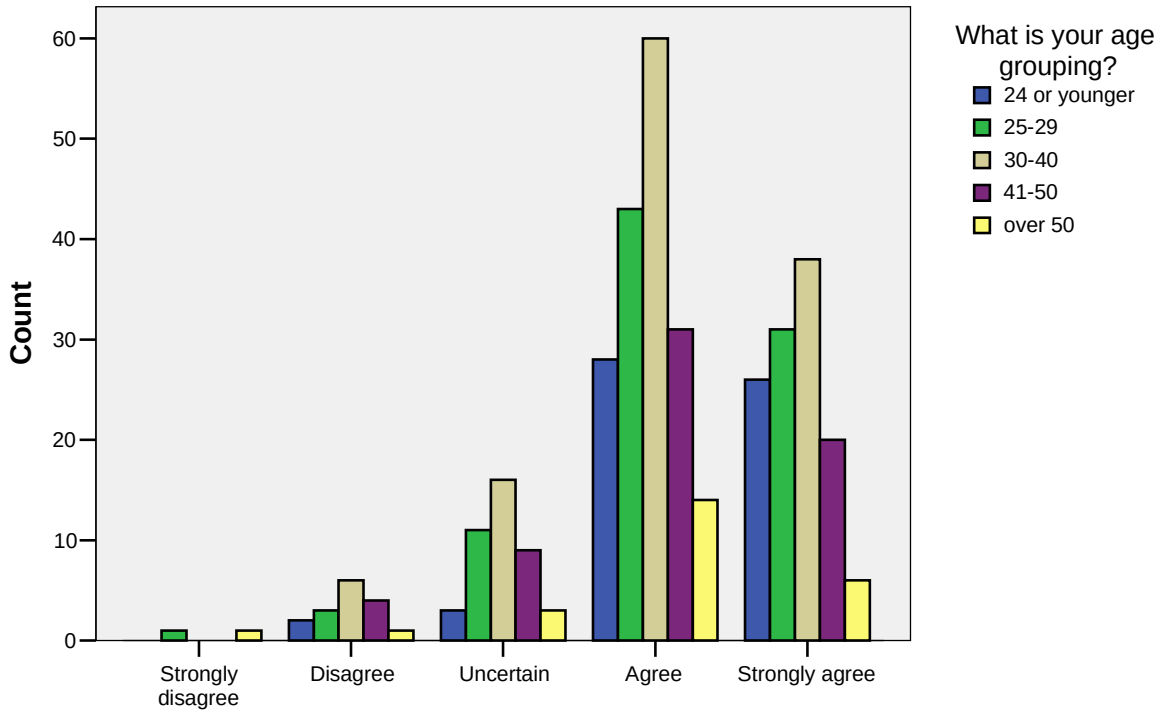
			What is your age		
			41-50	over 50	Total
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	Count	0	1	2
		Expected Count	,4	,1	2,0
	Disagree	Count	4	1	16
		Expected Count	2,9	1,1	16,0
	Uncertain	Count	9	3	42
		Expected Count	7,5	2,9	42,0
	Agree	Count	31	14	176
		Expected Count	31,6	12,3	176,0
	Strongly agree	Count	20	6	121
		Expected Count	21,7	8,5	121,0
Total		Count	64	25	357
		Expected Count	64,0	25,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14,045[a]	16	,595
Likelihood Ratio	12,716	16	,693
Linear-by-Linear Association	4,928	1	,026
N of Valid Cases	357		

a. 10 cells (40,0%) have expected count less than 5. The minimum expected count is ,14.

Bar Chart



Learning is enhanced when text and pictures are integrated in a multimedia environment

Educational games motivate learners and contribute to developing skills such as teamwork * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	Count	3	2	0
		Expected Count	1,5	2,3	3,0
	Disagree	Count	5	4	17
		Expected Count	6,1	9,1	12,0
	Uncertain	Count	12	14	29
		Expected Count	12,5	18,7	24,7
	Agree	Count	23	43	45
		Expected Count	25,6	38,4	50,8
	Strongly agree	Count	17	27	28
		Expected Count	14,3	21,5	28,4
Total		Count	60	90	119
		Expected Count	60,0	90,0	119,0

Crosstab

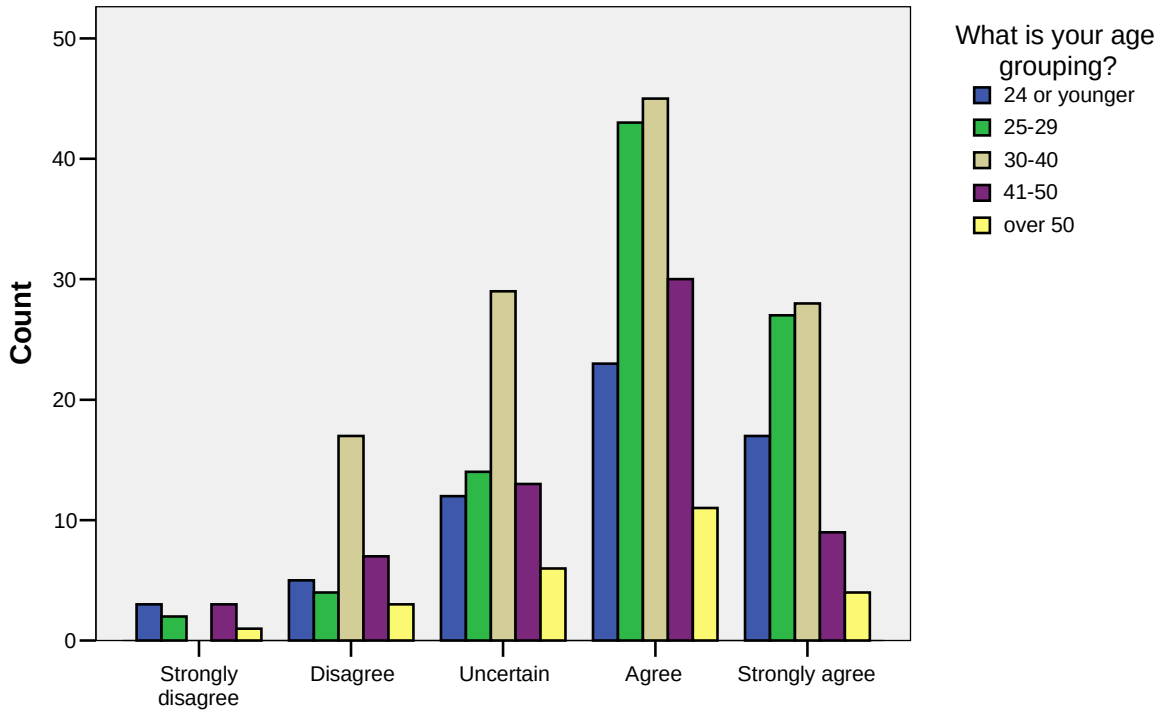
			What is your age		
			41-50	over 50	Total
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	Count	3	1	9
		Expected Count	1,6	,6	9,0
	Disagree	Count	7	3	36
		Expected Count	6,3	2,5	36,0
	Uncertain	Count	13	6	74
		Expected Count	12,9	5,2	74,0
	Agree	Count	30	11	152
		Expected Count	26,5	10,7	152,0
	Strongly agree	Count	9	4	85
		Expected Count	14,8	6,0	85,0
Total		Count	62	25	356
		Expected Count	62,0	25,0	356,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20,147[a]	16	,214
Likelihood Ratio	23,446	16	,102
Linear-by-Linear Association	4,122	1	,042
N of Valid Cases	356		

a. 6 cells (24,0%) have expected count less than 5. The minimum expected count is ,63.

Bar Chart



Educational games motivate learners and contribute to developing skills such as teamwork

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	Count	1	0	1
		Expected Count	,3	,5	,7
	Disagree	Count	7	2	1
		Expected Count	1,9	2,8	3,8
	Uncertain	Count	8	12	9
		Expected Count	7,1	10,9	14,6
	Agree	Count	23	33	44
		Expected Count	21,2	32,4	43,5
	Strongly agree	Count	18	40	62
		Expected Count	26,5	40,4	54,3
Total		Count	57	87	117
		Expected Count	57,0	87,0	117,0

Crosstab

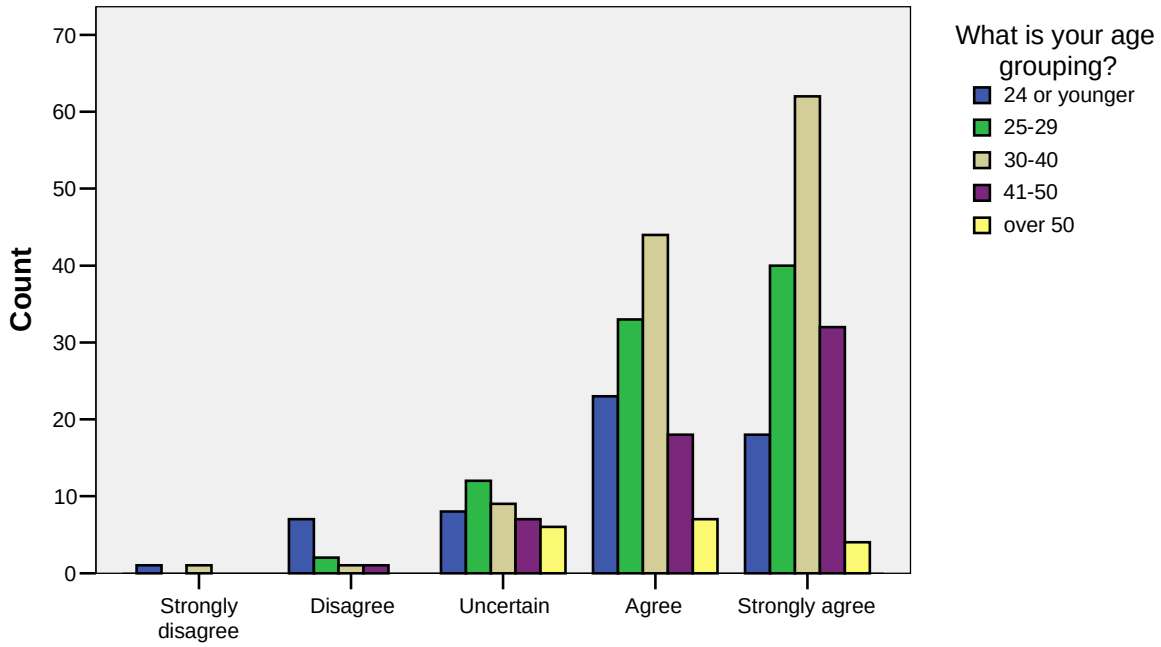
			What is your age		
			41-50	over 50	Total
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	Count	0	0	2
		Expected Count	,3	,1	2,0
	Disagree	Count	1	0	11
		Expected Count	1,9	,6	11,0
	Uncertain	Count	7	6	42
		Expected Count	7,3	2,1	42,0
	Agree	Count	18	7	125
		Expected Count	21,6	6,3	125,0
	Strongly agree	Count	32	4	156
		Expected Count	26,9	7,9	156,0
Total		Count	58	17	336
		Expected Count	58,0	17,0	336,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36,802[a]	16	,002
Likelihood Ratio	31,660	16	,011
Linear-by-Linear Association	4,725	1	,030
N of Valid Cases	336		

a. 11 cells (44,0%) have expected count less than 5. The minimum expected count is ,10.

Bar Chart



The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Technology facilitates easier access to material for those studying part-time * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Technology facilitates easier access to material for those studying part-time	Strongly disagree	Count	0	0	3
		Expected Count	,9	1,3	1,7
	Disagree	Count	3	1	1
		Expected Count	,9	1,3	1,7
	Uncertain	Count	8	4	4
		Expected Count	3,6	5,4	7,3
	Agree	Count	20	26	41
		Expected Count	18,8	28,1	37,8
	Strongly agree	Count	27	56	68
		Expected Count	33,9	50,9	68,4
Total		Count	58	87	117
		Expected Count	58,0	87,0	117,0

Crosstab

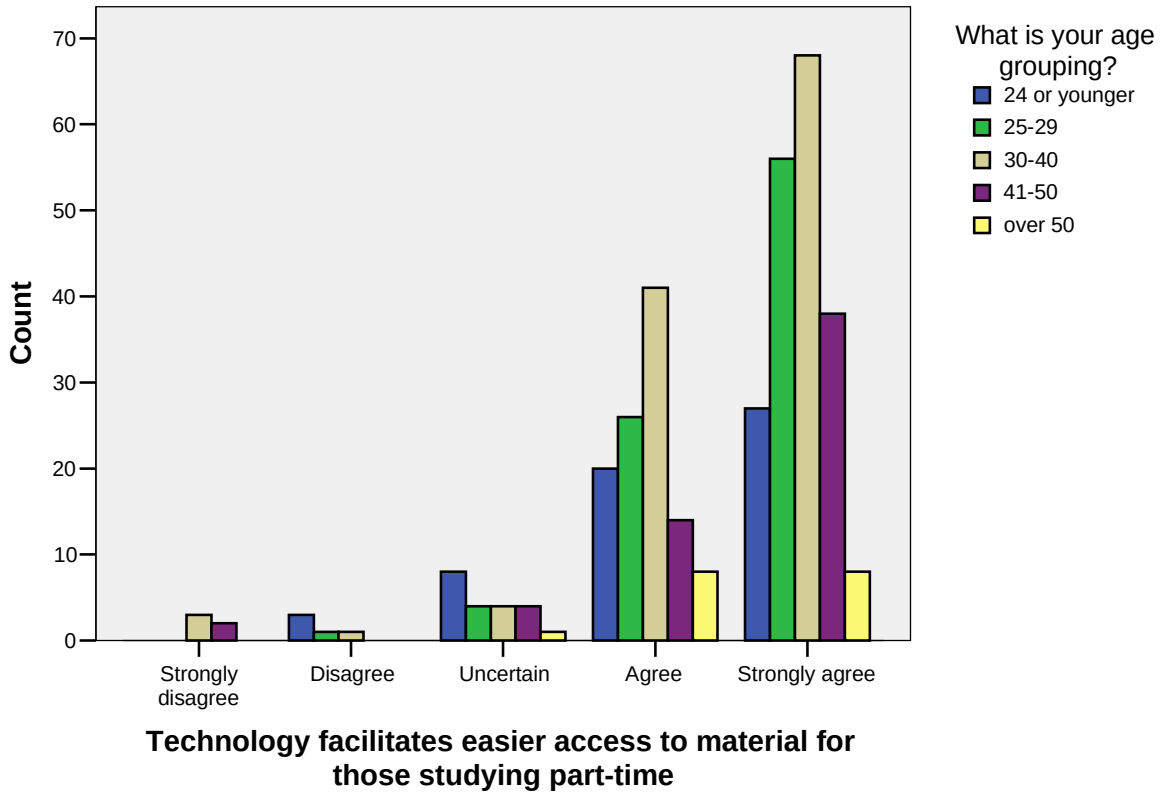
			What is your age		
			41-50	over 50	Total
Technology facilitates easier access to material for those studying part-time	Strongly disagree	Count	2	0	5
		Expected Count	,9	,3	5,0
	Disagree	Count	0	0	5
		Expected Count	,9	,3	5,0
	Uncertain	Count	4	1	21
		Expected Count	3,6	1,1	21,0
	Agree	Count	14	8	109
		Expected Count	18,8	5,5	109,0
	Strongly agree	Count	38	8	197
		Expected Count	33,9	9,9	197,0
Total		Count	58	17	337
		Expected Count	58,0	17,0	337,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,521[a]	16	,079
Likelihood Ratio	24,434	16	,080
Linear-by-Linear Association	,946	1	,331
N of Valid Cases	337		

a. 13 cells (52,0%) have expected count less than 5. The minimum expected count is ,25.

Bar Chart



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	Count	5	9	5
		Expected Count	3,3	4,9	6,6
	Disagree	Count	12	15	11
		Expected Count	7,8	11,5	15,7
	Uncertain	Count	19	27	29
		Expected Count	16,7	24,8	33,8
	Agree	Count	11	17	37
		Expected Count	15,0	22,3	30,3
	Strongly agree	Count	11	18	35
		Expected Count	15,2	22,5	30,6
Total		Count	58	86	117
		Expected Count	58,0	86,0	117,0

Crosstab

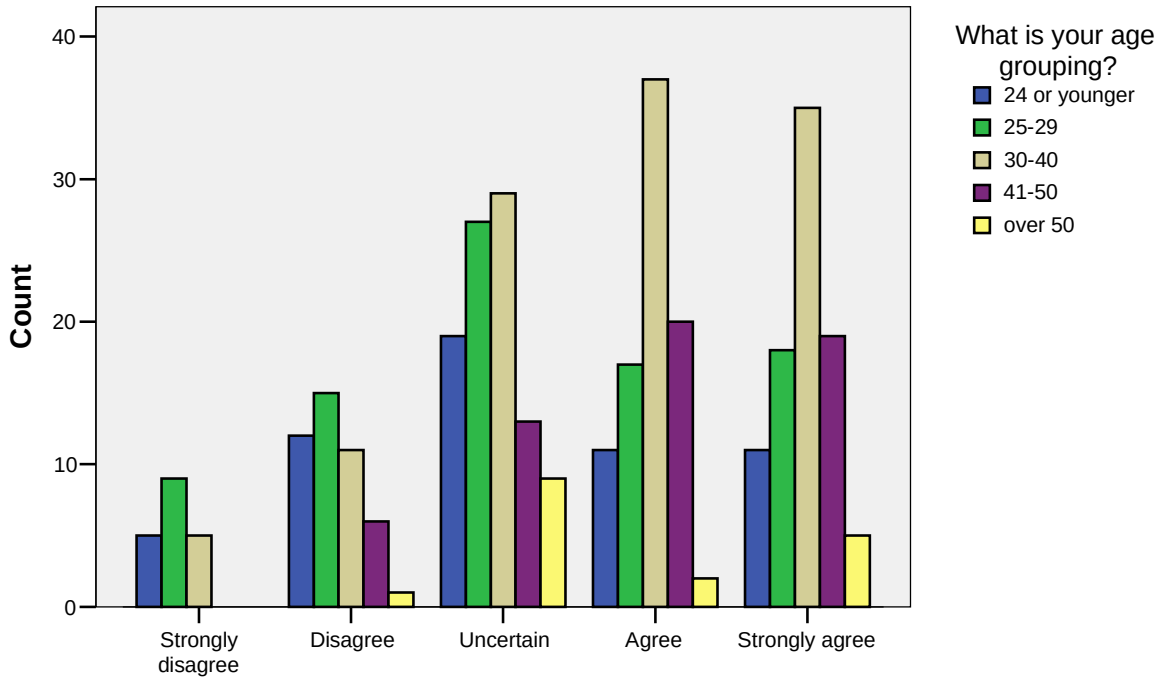
			What is your age		
			41-50	over 50	Total
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	Count	0	0	19
		Expected Count	3,3	1,0	19,0
	Disagree	Count	6	1	45
		Expected Count	7,8	2,3	45,0
	Uncertain	Count	13	9	97
		Expected Count	16,7	4,9	97,0
	Agree	Count	20	2	87
		Expected Count	15,0	4,4	87,0
	Strongly agree	Count	19	5	88
		Expected Count	15,2	4,5	88,0
Total		Count	58	17	336
		Expected Count	58,0	17,0	336,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30,820[a]	16	,014
Likelihood Ratio	34,025	16	,005
Linear-by-Linear Association	14,645	1	,000
N of Valid Cases	336		

a. 8 cells (32,0%) have expected count less than 5. The minimum expected count is ,96.

Bar Chart



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	Count	5	10	5
		Expected Count	3,8	5,6	7,7
	Disagree	Count	22	16	24
		Expected Count	12,3	18,0	24,8
	Uncertain	Count	14	36	41
		Expected Count	21,6	31,7	43,7
	Agree	Count	8	17	32
		Expected Count	12,6	18,5	25,5
	Strongly agree	Count	9	6	15
		Expected Count	7,6	11,2	15,4
Total		Count	58	85	117
		Expected Count	58,0	85,0	117,0

Crosstab

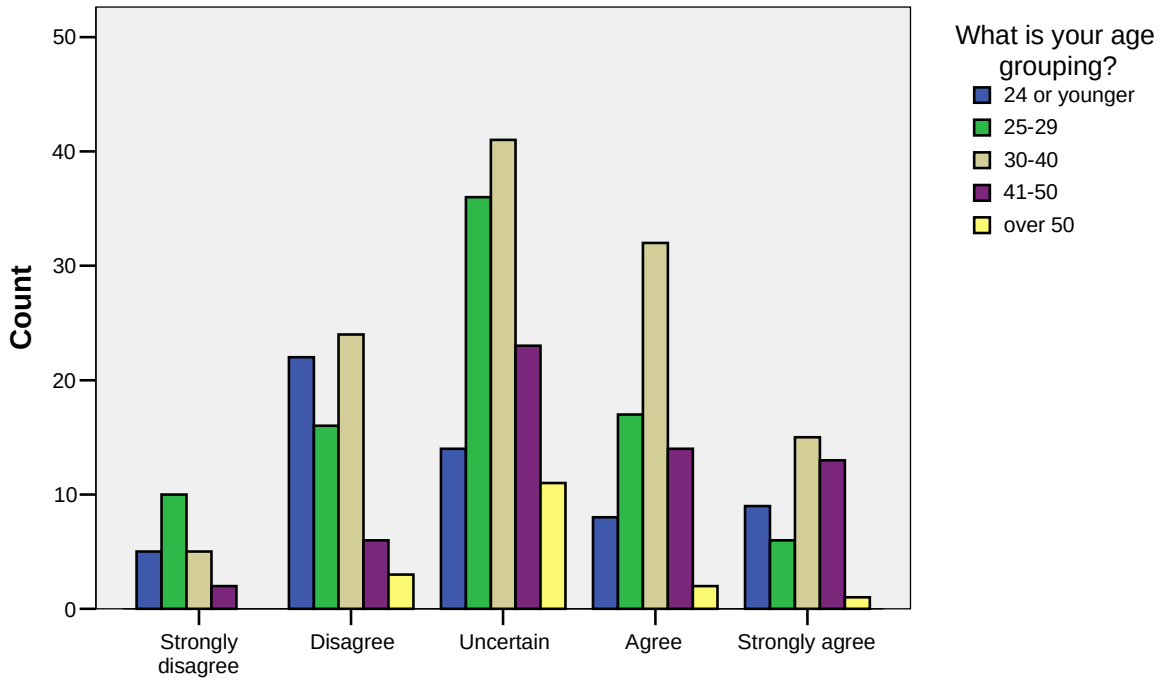
			What is your age		
			41-50	over 50	Total
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	Count	2	0	22
		Expected Count	3,8	1,1	22,0
	Disagree	Count	6	3	71
		Expected Count	12,3	3,6	71,0
	Uncertain	Count	23	11	125
		Expected Count	21,6	6,3	125,0
	Agree	Count	14	2	73
		Expected Count	12,6	3,7	73,0
	Strongly agree	Count	13	1	44
		Expected Count	7,6	2,2	44,0
Total		Count	58	17	335
		Expected Count	58,0	17,0	335,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36,513[a]	16	,002
Likelihood Ratio	36,558	16	,002
Linear-by-Linear Association	8,879	1	,003
N of Valid Cases	335		

a. 6 cells (24,0%) have expected count less than 5. The minimum expected count is 1,12.

Bar Chart



There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Study at an Open University is especially of advantage to adults who have work and family obligations * What is your age grouping?

Crosstab

			What is your age grouping?		
			24 or younger	25-29	30-40
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	Count	4	0	1
		Expected Count	,9	1,3	1,7
	Disagree	Count	4	1	0
		Expected Count	,9	1,3	1,7
	Uncertain	Count	6	2	2
		Expected Count	1,7	2,6	3,5
	Agree	Count	15	13	14
		Expected Count	9,8	14,7	19,8
	Strongly agree	Count	29	71	100
		Expected Count	44,7	67,1	90,3
Total		Count	58	87	117
		Expected Count	58,0	87,0	117,0

Crosstab

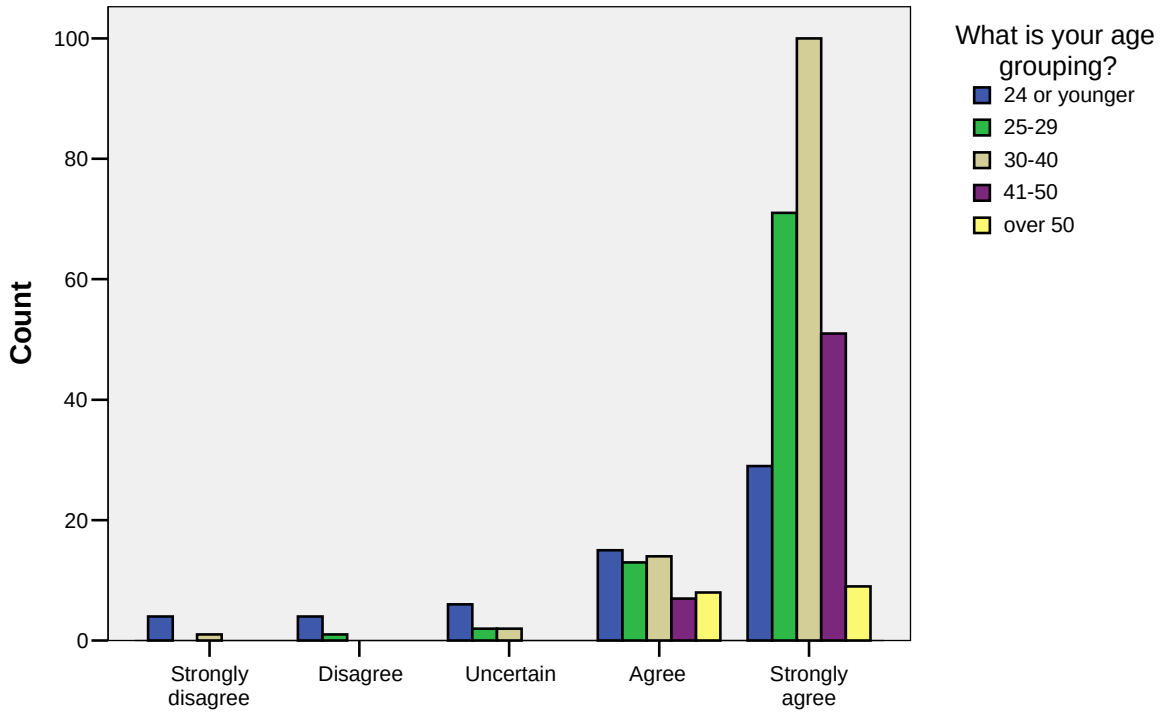
			What is your age		
			41-50	over 50	Total
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	Count	0	0	5
		Expected Count	,9	,3	5,0
	Disagree	Count	0	0	5
		Expected Count	,9	,3	5,0
	Uncertain	Count	0	0	10
		Expected Count	1,7	,5	10,0
	Agree	Count	7	8	57
		Expected Count	9,8	2,9	57,0
	Strongly agree	Count	51	9	260
		Expected Count	44,7	13,1	260,0
Total		Count	58	17	337
		Expected Count	58,0	17,0	337,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	65,714[a]	16	,000
Likelihood Ratio	56,063	16	,000
Linear-by-Linear Association	21,884	1	,000
N of Valid Cases	337		

a. 16 cells (64,0%) have expected count less than 5. The minimum expected count is ,25.

Bar Chart



Study at an Open University is especially of advantage to adults who have work and family obligations

B.6 Kreuztabelle zur Variablen Geschlecht

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
To what extent have you used advanced technological equipment in your professional life? * Gender	355	98,9%	4	1,1%	359	100,0%
Have you had to change your way of working because of technological developments? * Gender	354	98,6%	5	1,4%	359	100,0%
Thanks to technology, the problems of access to learning for students with disabilities have been resolved * Gender	357	99,4%	2	,6%	359	100,0%
Contacts between students and teachers can have the same intensity in online education as in face-to-face education * Gender	354	98,6%	5	1,4%	359	100,0%
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * Gender	355	98,9%	4	1,1%	359	100,0%
Only optimistic people think that the impact of technology on learning is beneficial * Gender	355	98,9%	4	1,1%	359	100,0%
From my personal study experience I find that the impact of technology on learning is valuable * Gender	355	98,9%	4	1,1%	359	100,0%
Information and communications technology has usually been used to encourage us to be active participants in learning * Gender	355	98,9%	4	1,1%	359	100,0%
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * Gender	356	99,2%	3	,8%	359	100,0%
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * Gender	353	98,3%	6	1,7%	359	100,0%

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Learning is enhanced when text and pictures are integrated in a multimedia environment * Gender	355	98,9%	4	1,1%	359	100,0%
Educational games motivate learners and contribute to developing skills such as teamwork * Gender	354	98,6%	5	1,4%	359	100,0%
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * Gender	335	93,3%	24	6,7%	359	100,0%
Technology facilitates easier access to material for those studying part-time * Gender	336	93,6%	23	6,4%	359	100,0%
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * Gender	335	93,3%	24	6,7%	359	100,0%
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * Gender	334	93,0%	25	7,0%	359	100,0%
Study at an Open University is especially of advantage to adults who have work and family obligations * Gender	336	93,6%	23	6,4%	359	100,0%

To what extent have you used advanced technological equipment in your professional life? * Gender

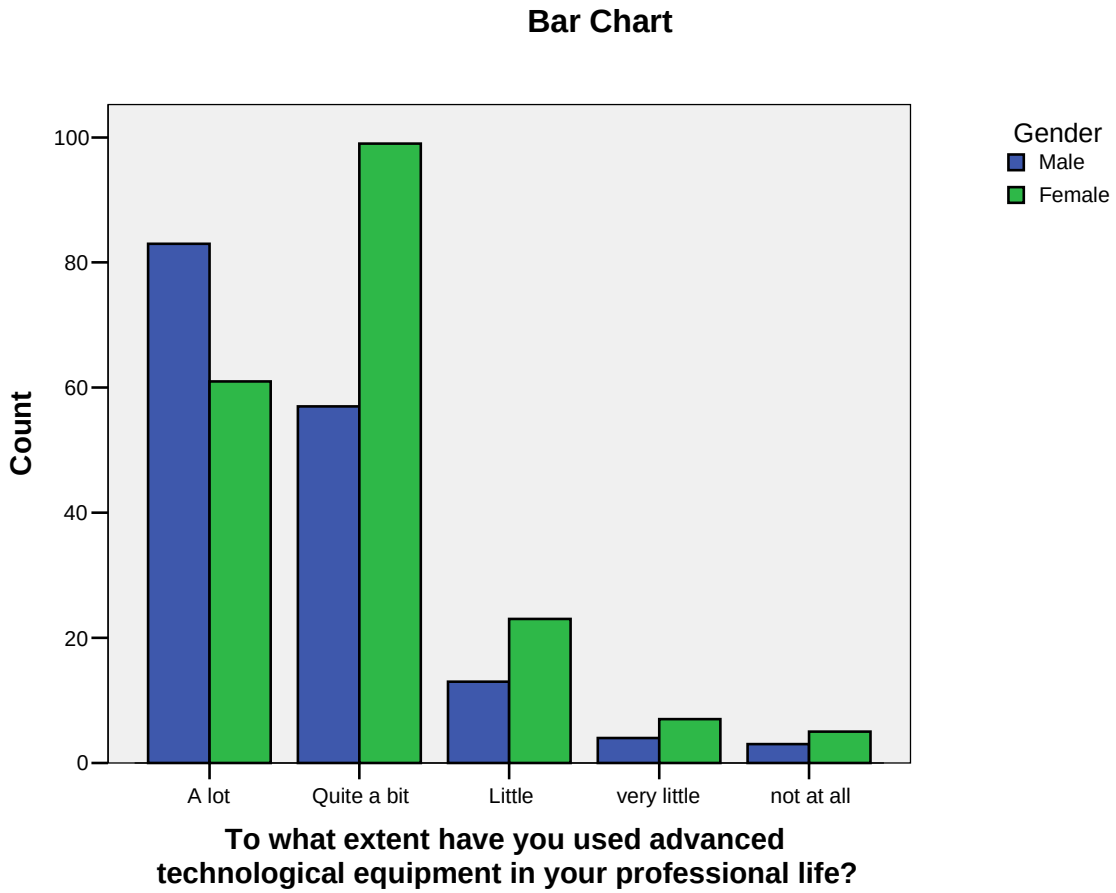
Crosstab

			Gender		
			Male	Female	Total
To what extent have you used advanced technological equipment in your professional life?	A lot	Count	83	61	144
		Expected Count	64,9	79,1	144,0
	Quite a bit	Count	57	99	156
		Expected Count	70,3	85,7	156,0
	Little	Count	13	23	36
		Expected Count	16,2	19,8	36,0
	very little	Count	4	7	11
		Expected Count	5,0	6,0	11,0
	not at all	Count	3	5	8
		Expected Count	3,6	4,4	8,0
Total		Count	160	195	355
		Expected Count	160,0	195,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15,464[a]	4	,004
Likelihood Ratio	15,515	4	,004
Linear-by-Linear Association	8,868	1	,003
N of Valid Cases	355		

a. 3 cells (30,0%) have expected count less than 5. The minimum expected count is 3,61.



Have you had to change your way of working because of technological developments? * Gender

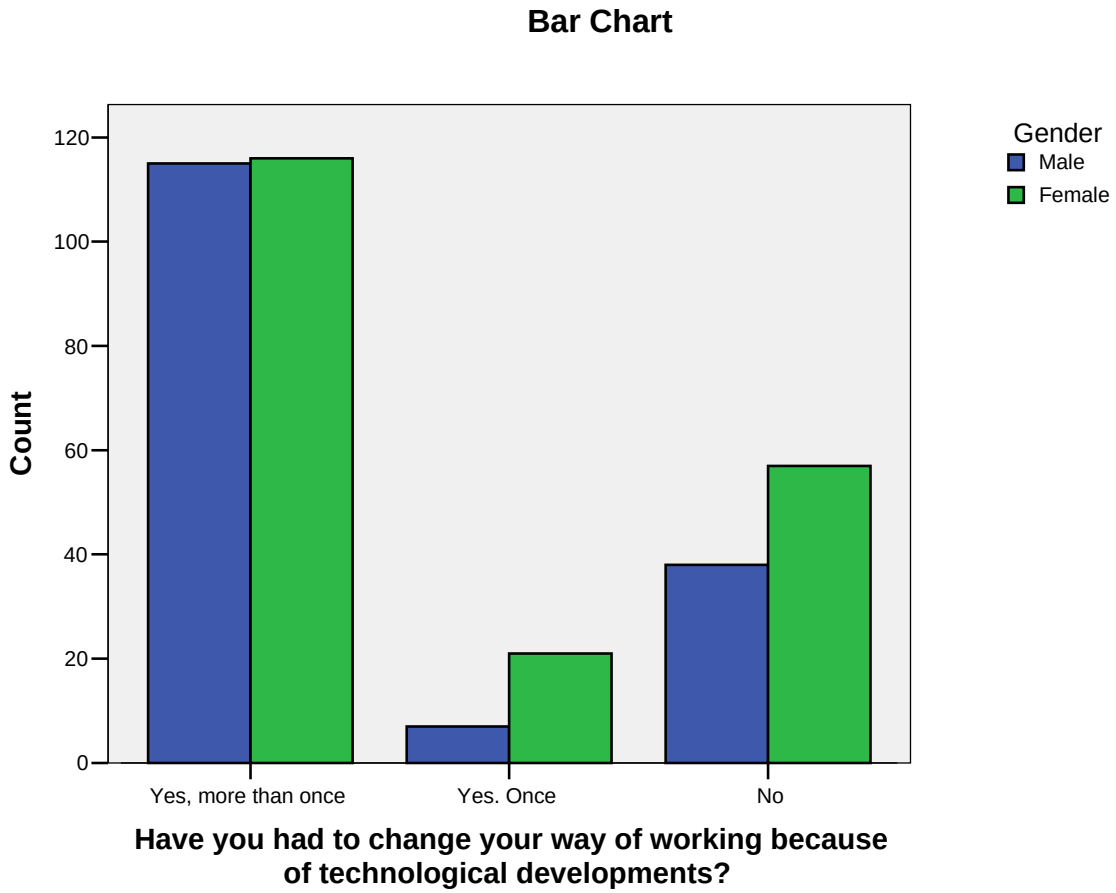
Crosstab

			Gender		Total
			Male	Female	
Have you had to change your way of working because of technological developments?	Yes, more than once	Count	115	116	231
		Expected Count	104,4	126,6	231,0
	Yes. Once	Count	7	21	28
		Expected Count	12,7	15,3	28,0
	No	Count	38	57	95
		Expected Count	42,9	52,1	95,0
Total		Count	160	194	354
		Expected Count	160,0	194,0	354,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7,609[a]	2	,022
Likelihood Ratio	7,885	2	,019
Linear-by-Linear Association	3,547	1	,060
N of Valid Cases	354		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 12,66.



Thanks to technology, the problems of access to learning for students with disabilities have been resolved * Gender

Crosstab

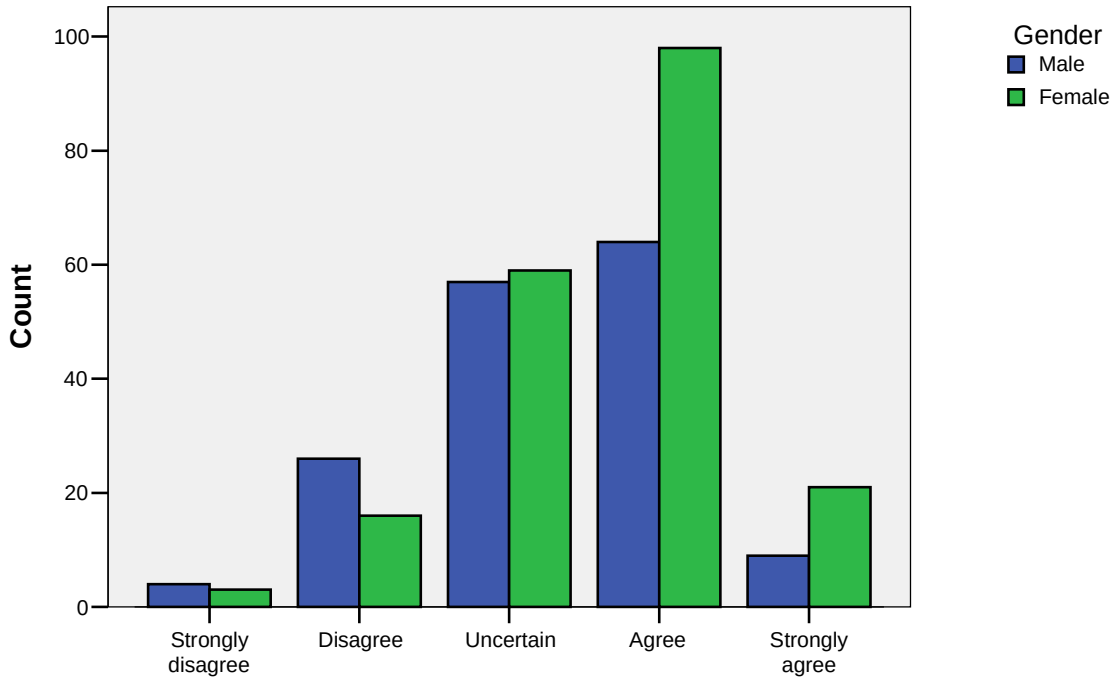
			Gender		
			Male	Female	Total
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	Count	4	3	7
		Expected Count	3,1	3,9	7,0
	Disagree	Count	26	16	42
		Expected Count	18,8	23,2	42,0
	Uncertain	Count	57	59	116
		Expected Count	52,0	64,0	116,0
	Agree	Count	64	98	162
		Expected Count	72,6	89,4	162,0
	Strongly agree	Count	9	21	30
		Expected Count	13,4	16,6	30,0
Total		Count	160	197	357
		Expected Count	160,0	197,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10,775[a]	4	,029
Likelihood Ratio	10,866	4	,028
Linear-by-Linear Association	10,224	1	,001
N of Valid Cases	357		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 3,14.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education * Gender

Crosstab

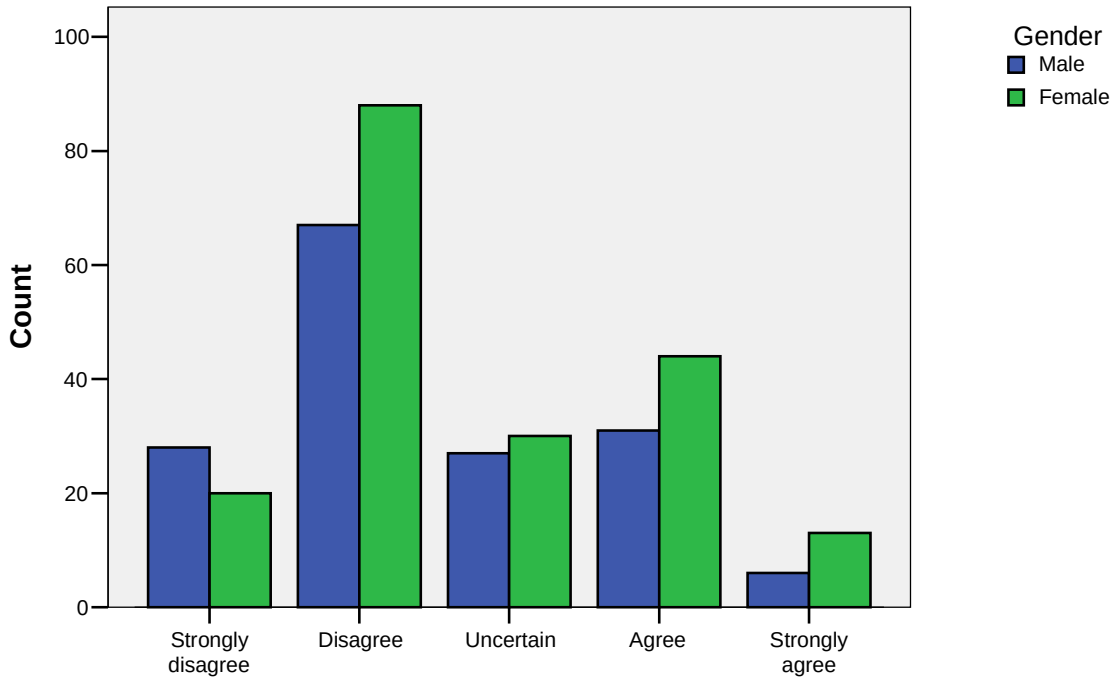
			Gender		
			Male	Female	Total
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	Count	28	20	48
		Expected Count	21,6	26,4	48,0
	Disagree	Count	67	88	155
		Expected Count	69,6	85,4	155,0
	Uncertain	Count	27	30	57
		Expected Count	25,6	31,4	57,0
	Agree	Count	31	44	75
		Expected Count	33,7	41,3	75,0
	Strongly agree	Count	6	13	19
		Expected Count	8,5	10,5	19,0
Total		Count	159	195	354
		Expected Count	159,0	195,0	354,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5,565[a]	4	,234
Likelihood Ratio	5,590	4	,232
Linear-by-Linear Association	2,945	1	,086
N of Valid Cases	354		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,53.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * Gender

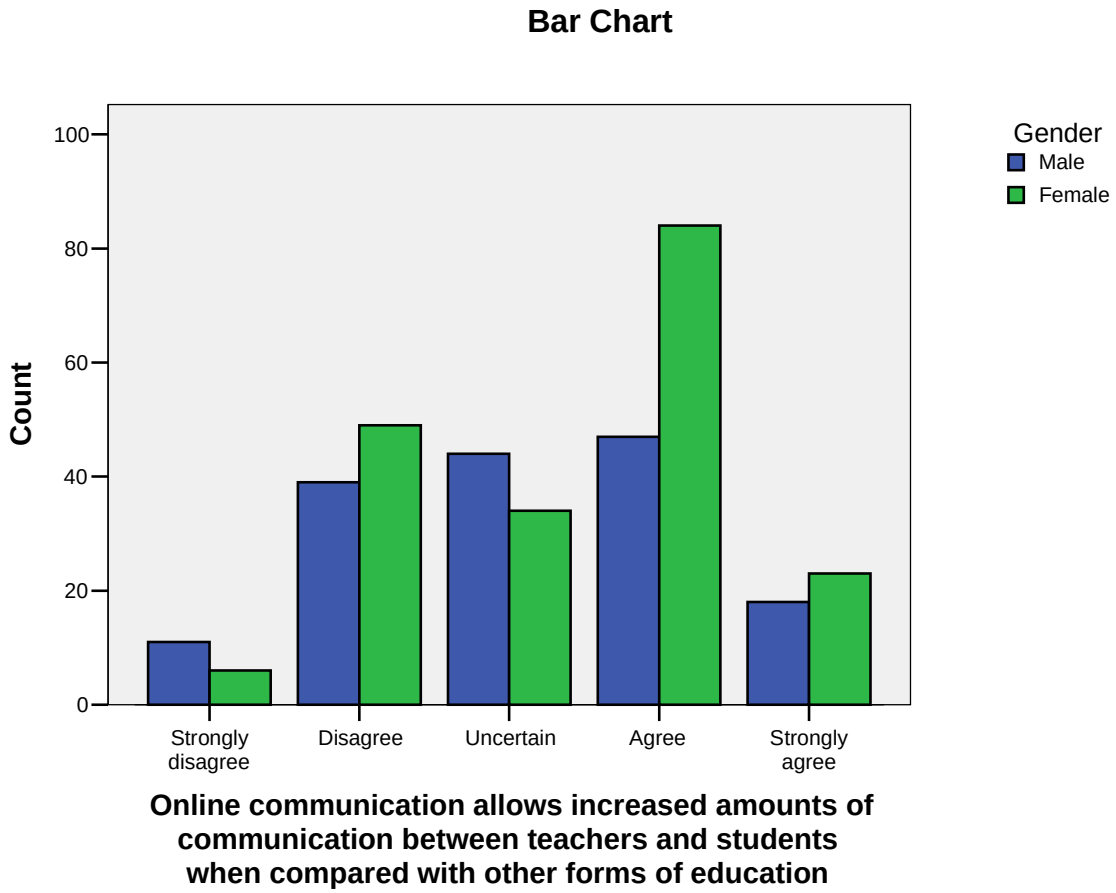
Crosstab

			Gender		
			Male	Female	Total
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	Count	11	6	17
		Expected Count	7,6	9,4	17,0
	Disagree	Count	39	49	88
		Expected Count	39,4	48,6	88,0
	Uncertain	Count	44	34	78
		Expected Count	34,9	43,1	78,0
	Agree	Count	47	84	131
		Expected Count	58,7	72,3	131,0
	Strongly agree	Count	18	23	41
		Expected Count	18,4	22,6	41,0
Total		Count	159	196	355
		Expected Count	159,0	196,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11,215[a]	4	,024
Likelihood Ratio	11,259	4	,024
Linear-by-Linear Association	3,318	1	,069
N of Valid Cases	355		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 7,61.



Only optimistic people think that the impact of technology on learning is beneficial * Gender

Crosstab

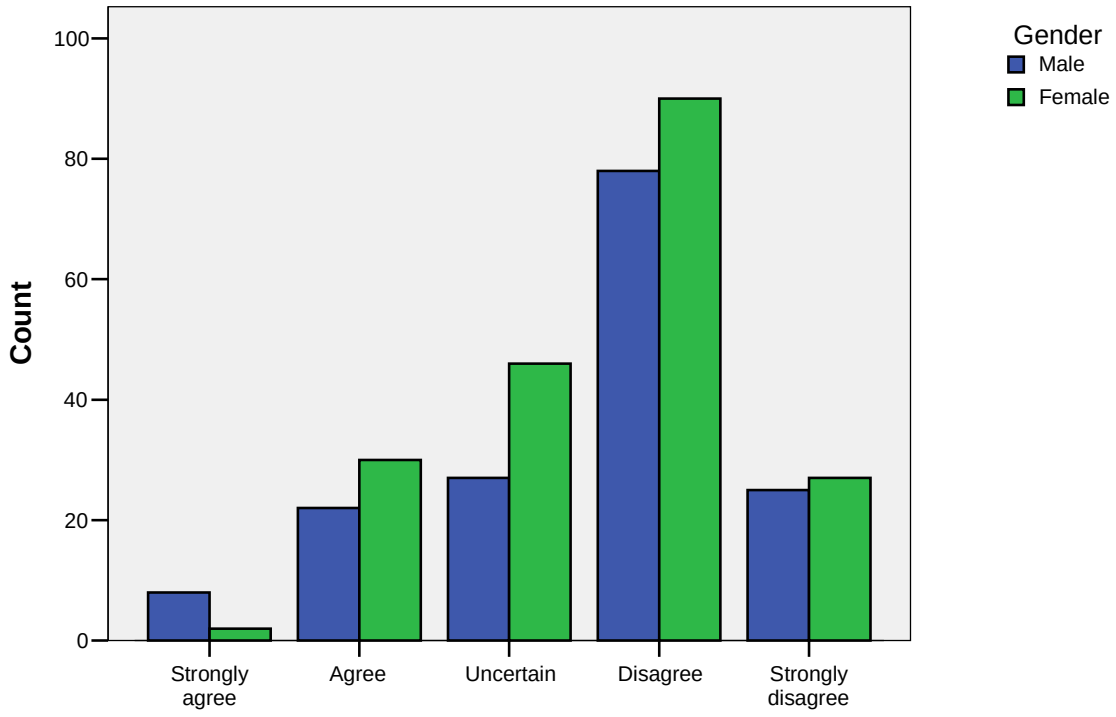
			Gender		
			Male	Female	Total
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	Count	8	2	10
		Expected Count	4,5	5,5	10,0
	Agree	Count	22	30	52
		Expected Count	23,4	28,6	52,0
	Uncertain	Count	27	46	73
		Expected Count	32,9	40,1	73,0
	Disagree	Count	78	90	168
		Expected Count	75,7	92,3	168,0
	Strongly disagree	Count	25	27	52
		Expected Count	23,4	28,6	52,0
Total		Count	160	195	355
		Expected Count	160,0	195,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7,331[a]	4	,119
Likelihood Ratio	7,572	4	,109
Linear-by-Linear Association	,000	1	,988
N of Valid Cases	355		

a. 1 cells (10,0%) have expected count less than 5. The minimum expected count is 4,51.

Bar Chart



Only optimistic people think that the impact of technology on learning is beneficial

From my personal study experience I find that the impact of technology on learning is valuable * Gender

Crosstab

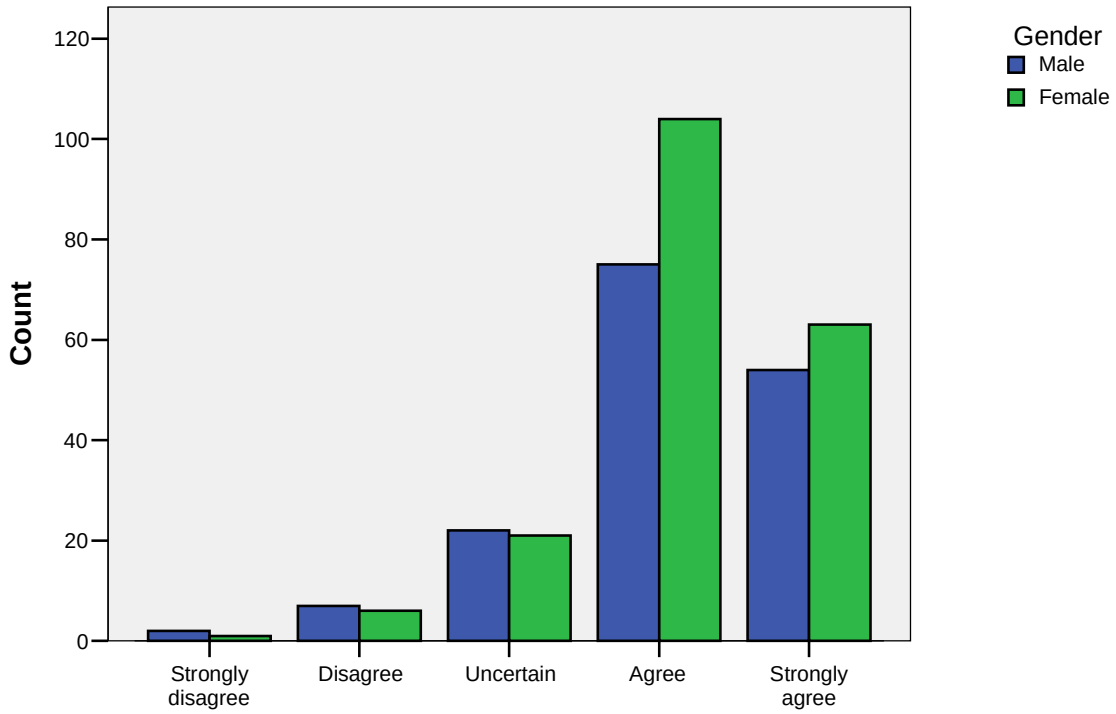
			Gender		
			Male	Female	Total
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	Count	2	1	3
		Expected Count	1,4	1,6	3,0
	Disagree	Count	7	6	13
		Expected Count	5,9	7,1	13,0
	Uncertain	Count	22	21	43
		Expected Count	19,4	23,6	43,0
	Agree	Count	75	104	179
		Expected Count	80,7	98,3	179,0
	Strongly agree	Count	54	63	117
		Expected Count	52,7	64,3	117,0
Total		Count	160	195	355
		Expected Count	160,0	195,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,397[a]	4	,663
Likelihood Ratio	2,396	4	,663
Linear-by-Linear Association	,534	1	,465
N of Valid Cases	355		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 1,35.

Bar Chart



From my personal study experience I find that the impact of technology on learning is valuable

Information and communications technology has usually been used to encourage us to be active participants in learning * Gender

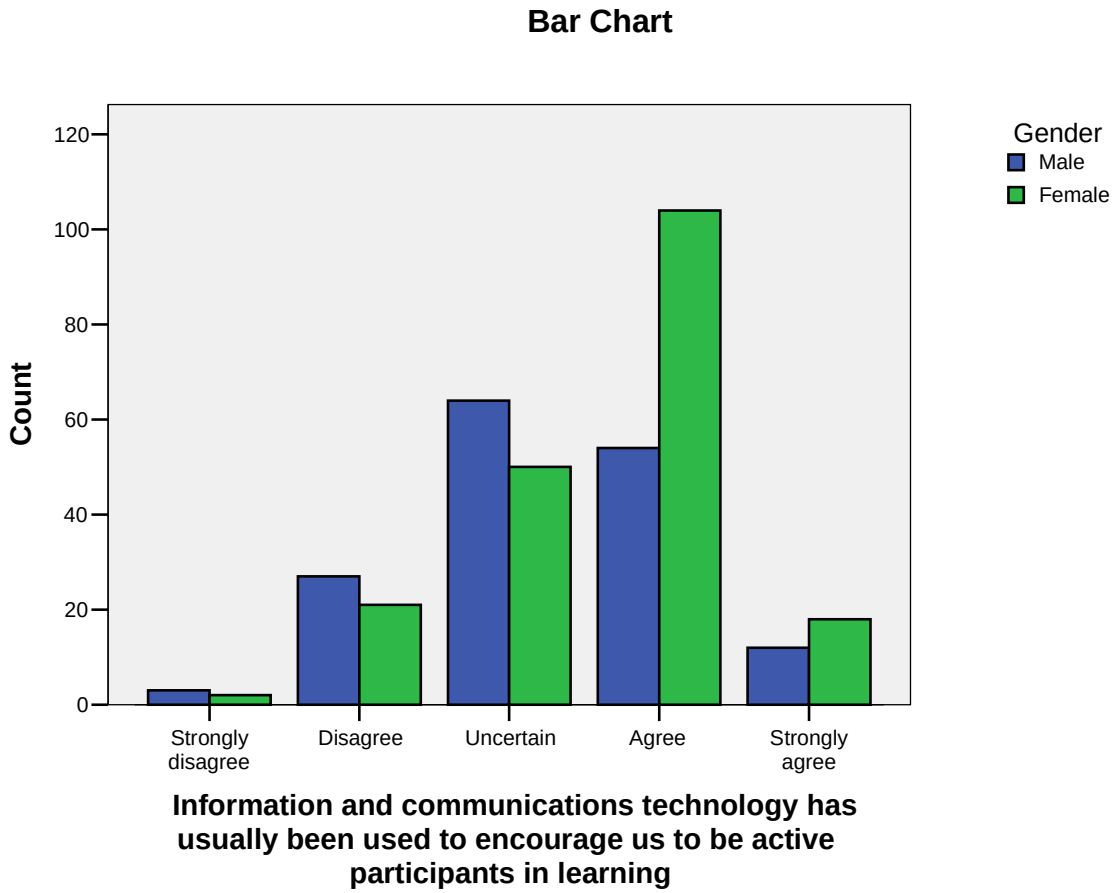
Crosstab

			Gender		
			Male	Female	Total
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	Count	3	2	5
		Expected Count	2,3	2,7	5,0
	Disagree	Count	27	21	48
		Expected Count	21,6	26,4	48,0
	Uncertain	Count	64	50	114
		Expected Count	51,4	62,6	114,0
	Agree	Count	54	104	158
		Expected Count	71,2	86,8	158,0
	Strongly agree	Count	12	18	30
		Expected Count	13,5	16,5	30,0
Total		Count	160	195	355
		Expected Count	160,0	195,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16,401[a]	4	,003
Likelihood Ratio	16,527	4	,002
Linear-by-Linear Association	10,811	1	,001
N of Valid Cases	355		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 2,25.



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * Gender

Crosstab

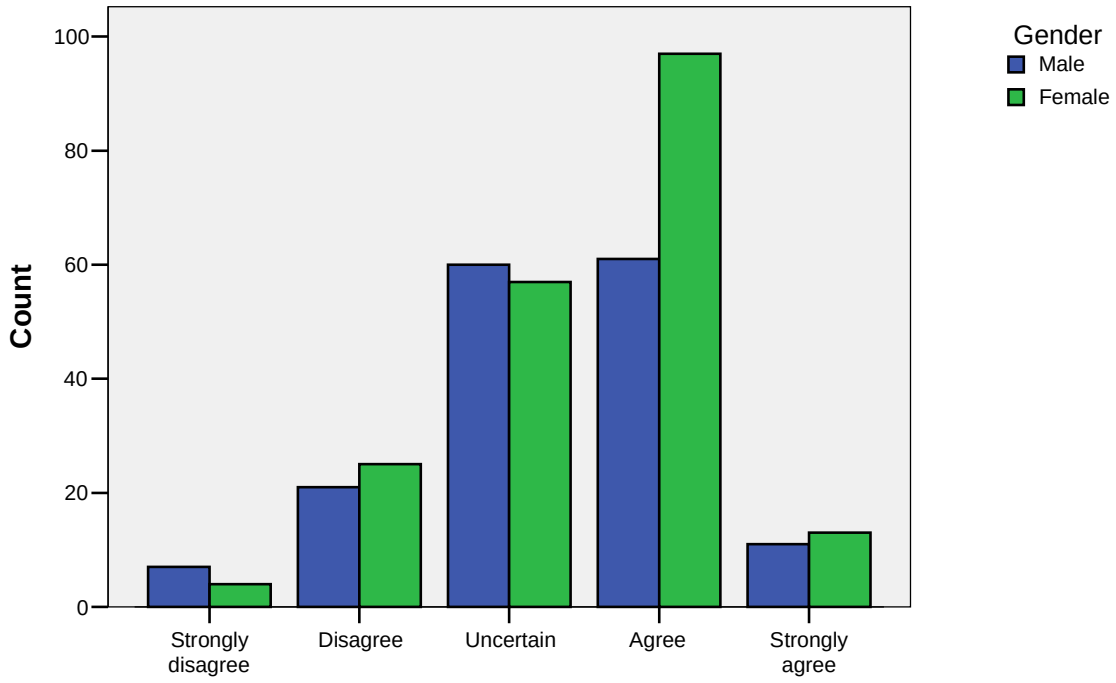
			Gender		
			Male	Female	Total
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	Count	7	4	11
		Expected Count	4,9	6,1	11,0
	Disagree	Count	21	25	46
		Expected Count	20,7	25,3	46,0
	Uncertain	Count	60	57	117
		Expected Count	52,6	64,4	117,0
	Agree	Count	61	97	158
		Expected Count	71,0	87,0	158,0
	Strongly agree	Count	11	13	24
		Expected Count	10,8	13,2	24,0
Total		Count	160	196	356
		Expected Count	160,0	196,0	356,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,033[a]	4	,197
Likelihood Ratio	6,049	4	,196
Linear-by-Linear Association	2,728	1	,099
N of Valid Cases	356		

a. 1 cells (10,0%) have expected count less than 5. The minimum expected count is 4,94.

Bar Chart



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * Gender

Crosstab

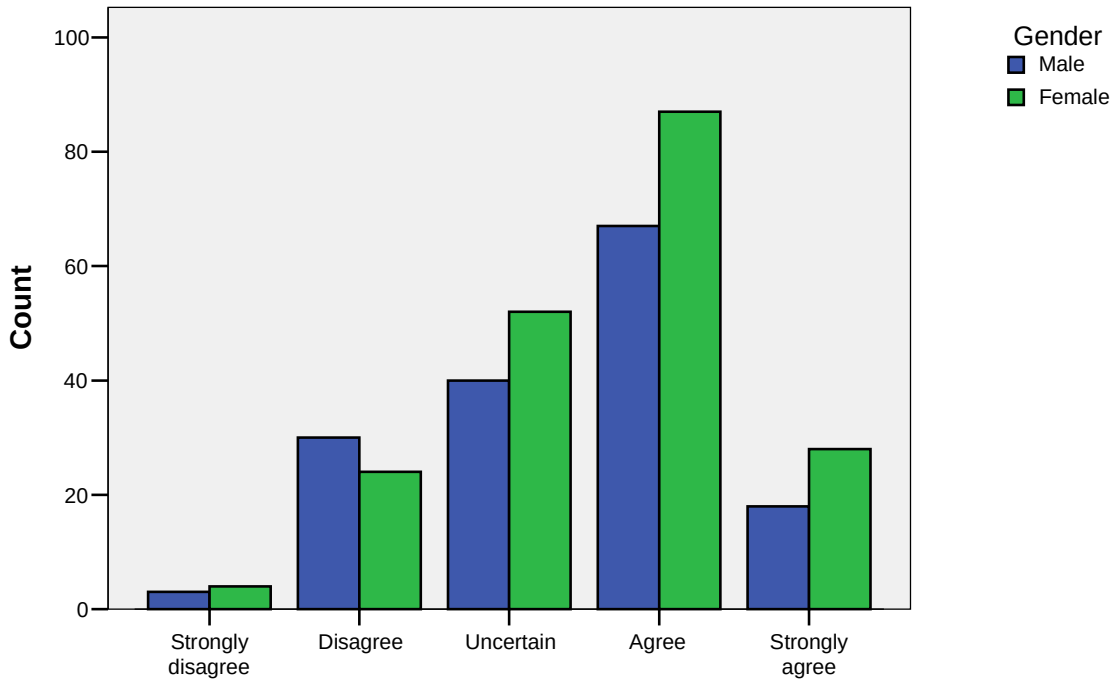
			Gender		
			Male	Female	Total
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	Count	3	4	7
		Expected Count	3,1	3,9	7,0
	Disagree	Count	30	24	54
		Expected Count	24,2	29,8	54,0
	Uncertain	Count	40	52	92
		Expected Count	41,2	50,8	92,0
	Agree	Count	67	87	154
		Expected Count	68,9	85,1	154,0
	Strongly agree	Count	18	28	46
		Expected Count	20,6	25,4	46,0
Total		Count	158	195	353
		Expected Count	158,0	195,0	353,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,304[a]	4	,508
Likelihood Ratio	3,292	4	,510
Linear-by-Linear Association	1,961	1	,161
N of Valid Cases	353		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 3,13.

Bar Chart



Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Learning is enhanced when text and pictures are integrated in a multimedia environment * Gender

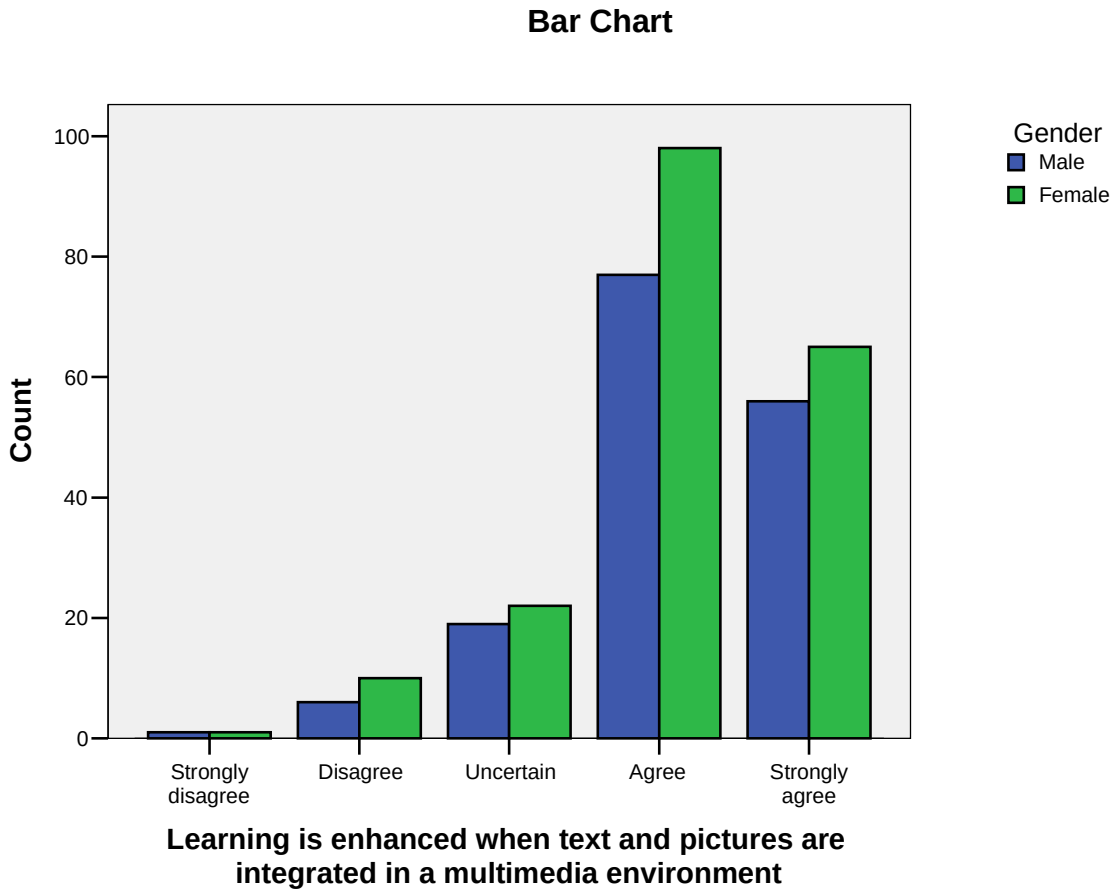
Crosstab

			Gender		
			Male	Female	Total
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	Count	1	1	2
		Expected Count	,9	1,1	2,0
	Disagree	Count	6	10	16
		Expected Count	7,2	8,8	16,0
	Uncertain	Count	19	22	41
		Expected Count	18,4	22,6	41,0
	Agree	Count	77	98	175
		Expected Count	78,4	96,6	175,0
	Strongly agree	Count	56	65	121
		Expected Count	54,2	66,8	121,0
Total		Count	159	196	355
		Expected Count	159,0	196,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,559[a]	4	,968
Likelihood Ratio	,563	4	,967
Linear-by-Linear Association	,172	1	,679
N of Valid Cases	355		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is ,90.



Educational games motivate learners and contribute to developing skills such as teamwork * Gender

Crosstab

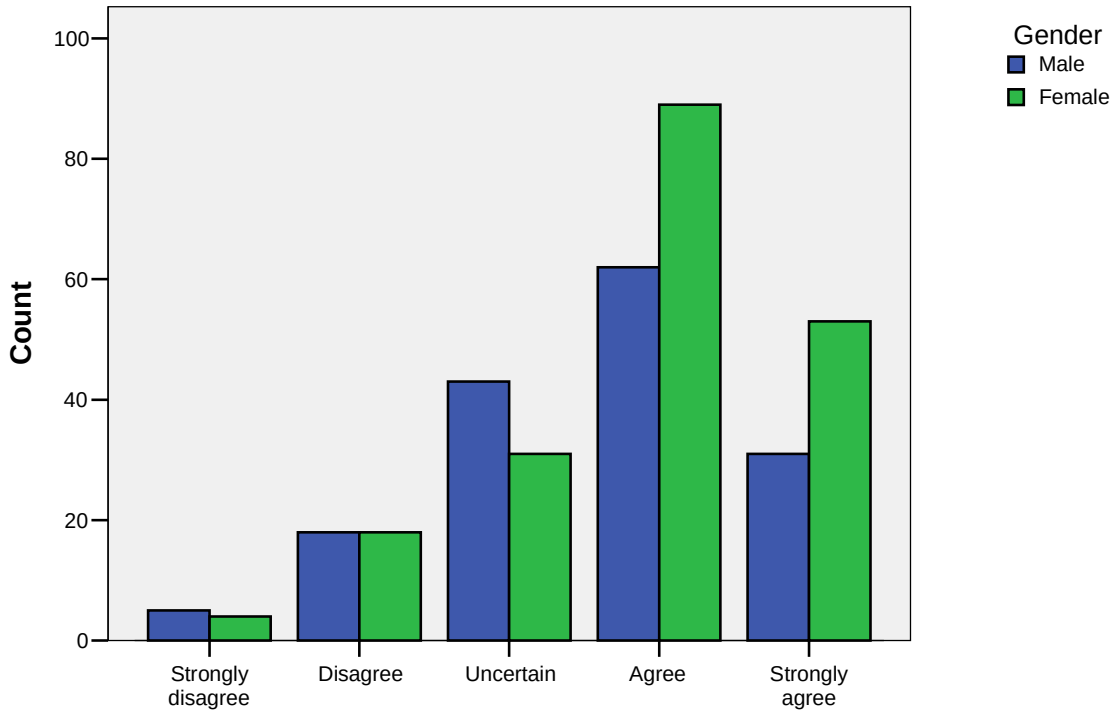
			Gender		
			Male	Female	Total
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	Count	5	4	9
		Expected Count	4,0	5,0	9,0
	Disagree	Count	18	18	36
		Expected Count	16,2	19,8	36,0
	Uncertain	Count	43	31	74
		Expected Count	33,2	40,8	74,0
	Agree	Count	62	89	151
		Expected Count	67,8	83,2	151,0
	Strongly agree	Count	31	53	84
		Expected Count	37,7	46,3	84,0
Total		Count	159	195	354
		Expected Count	159,0	195,0	354,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,080[a]	4	,059
Likelihood Ratio	9,082	4	,059
Linear-by-Linear Association	5,925	1	,015
N of Valid Cases	354		

a. 2 cells (20,0%) have expected count less than 5. The minimum expected count is 4,04.

Bar Chart



The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * Gender

Crosstab

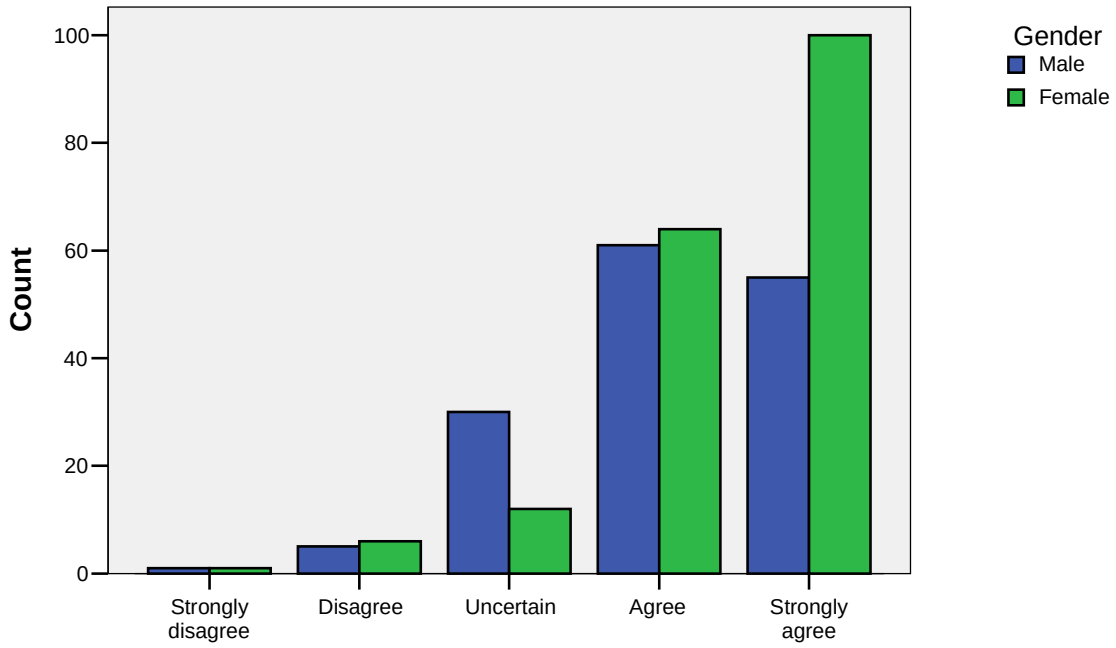
			Gender		
			Male	Female	Total
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	Count	1	1	2
		Expected Count	,9	1,1	2,0
	Disagree	Count	5	6	11
		Expected Count	5,0	6,0	11,0
	Uncertain	Count	30	12	42
		Expected Count	19,1	22,9	42,0
	Agree	Count	61	64	125
		Expected Count	56,7	68,3	125,0
	Strongly agree	Count	55	100	155
		Expected Count	70,3	84,7	155,0
Total		Count	152	183	335
		Expected Count	152,0	183,0	335,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18,229[a]	4	,001
Likelihood Ratio	18,515	4	,001
Linear-by-Linear Association	11,958	1	,001
N of Valid Cases	335		

a. 3 cells (30,0%) have expected count less than 5. The minimum expected count is ,91.

Bar Chart



The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Technology facilitates easier access to material for those studying part-time * Gender

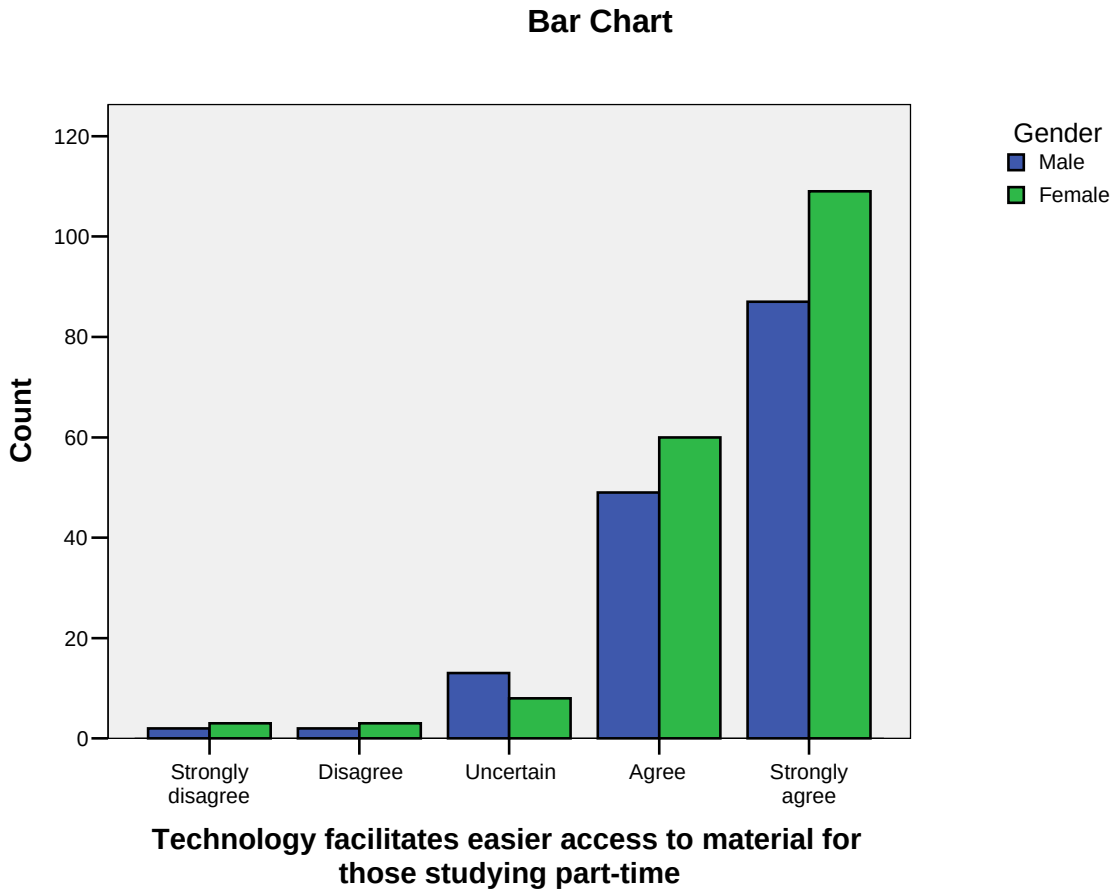
Crosstab

			Gender		
			Male	Female	Total
Technology facilitates easier access to material for those studying part-time	Strongly disagree	Count	2	3	5
		Expected Count	2,3	2,7	5,0
	Disagree	Count	2	3	5
		Expected Count	2,3	2,7	5,0
	Uncertain	Count	13	8	21
		Expected Count	9,6	11,4	21,0
	Agree	Count	49	60	109
		Expected Count	49,6	59,4	109,0
	Strongly agree	Count	87	109	196
		Expected Count	89,3	106,8	196,0
Total		Count	153	183	336
		Expected Count	153,0	183,0	336,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,511[a]	4	,643
Likelihood Ratio	2,509	4	,643
Linear-by-Linear Association	,346	1	,556
N of Valid Cases	336		

a. 4 cells (40,0%) have expected count less than 5. The minimum expected count is 2,28.



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * Gender

Crosstab

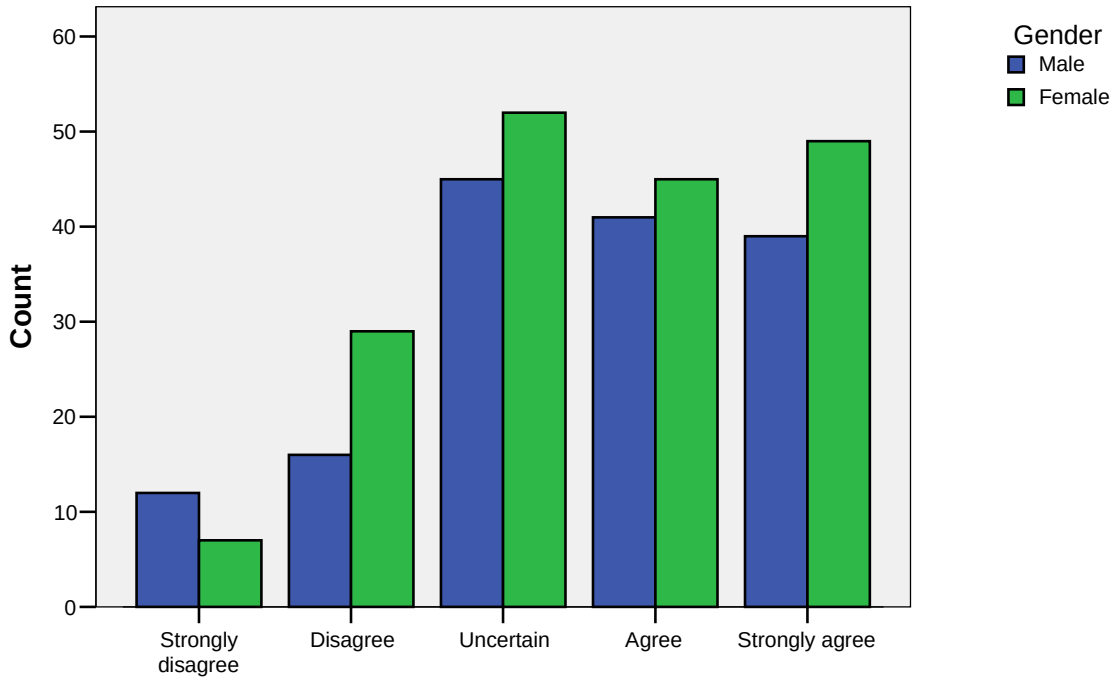
			Gender		
			Male	Female	Total
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	Count	12	7	19
		Expected Count	8,7	10,3	19,0
	Disagree	Count	16	29	45
		Expected Count	20,6	24,4	45,0
	Uncertain	Count	45	52	97
		Expected Count	44,3	52,7	97,0
	Agree	Count	41	45	86
		Expected Count	39,3	46,7	86,0
	Strongly agree	Count	39	49	88
		Expected Count	40,2	47,8	88,0
Total		Count	153	182	335
		Expected Count	153,0	182,0	335,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,422[a]	4	,352
Likelihood Ratio	4,458	4	,348
Linear-by-Linear Association	,066	1	,798
N of Valid Cases	335		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,68.

Bar Chart



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * Gender

Crosstab

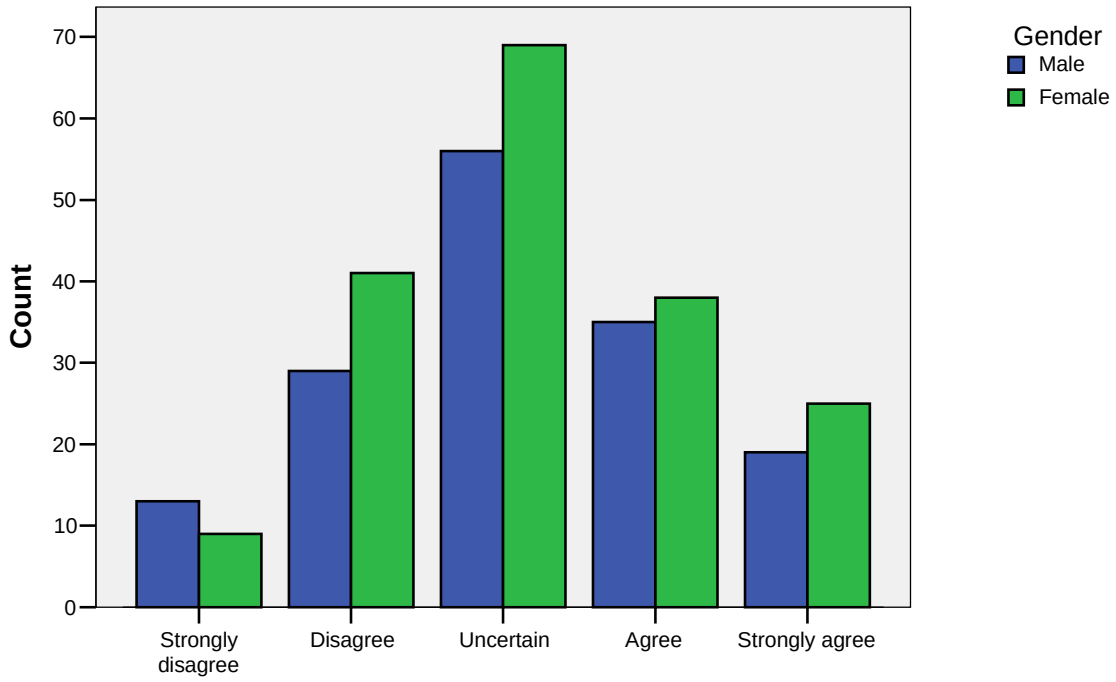
			Gender		
			Male	Female	Total
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	Count	13	9	22
		Expected Count	10,0	12,0	22,0
	Disagree	Count	29	41	70
		Expected Count	31,9	38,1	70,0
	Uncertain	Count	56	69	125
		Expected Count	56,9	68,1	125,0
	Agree	Count	35	38	73
		Expected Count	33,2	39,8	73,0
	Strongly agree	Count	19	25	44
		Expected Count	20,0	24,0	44,0
Total		Count	152	182	334
		Expected Count	152,0	182,0	334,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,403[a]	4	,662
Likelihood Ratio	2,399	4	,663
Linear-by-Linear Association	,115	1	,734
N of Valid Cases	334		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 10,01.

Bar Chart



There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Study at an Open University is especially of advantage to adults who have work and family obligations * Gender

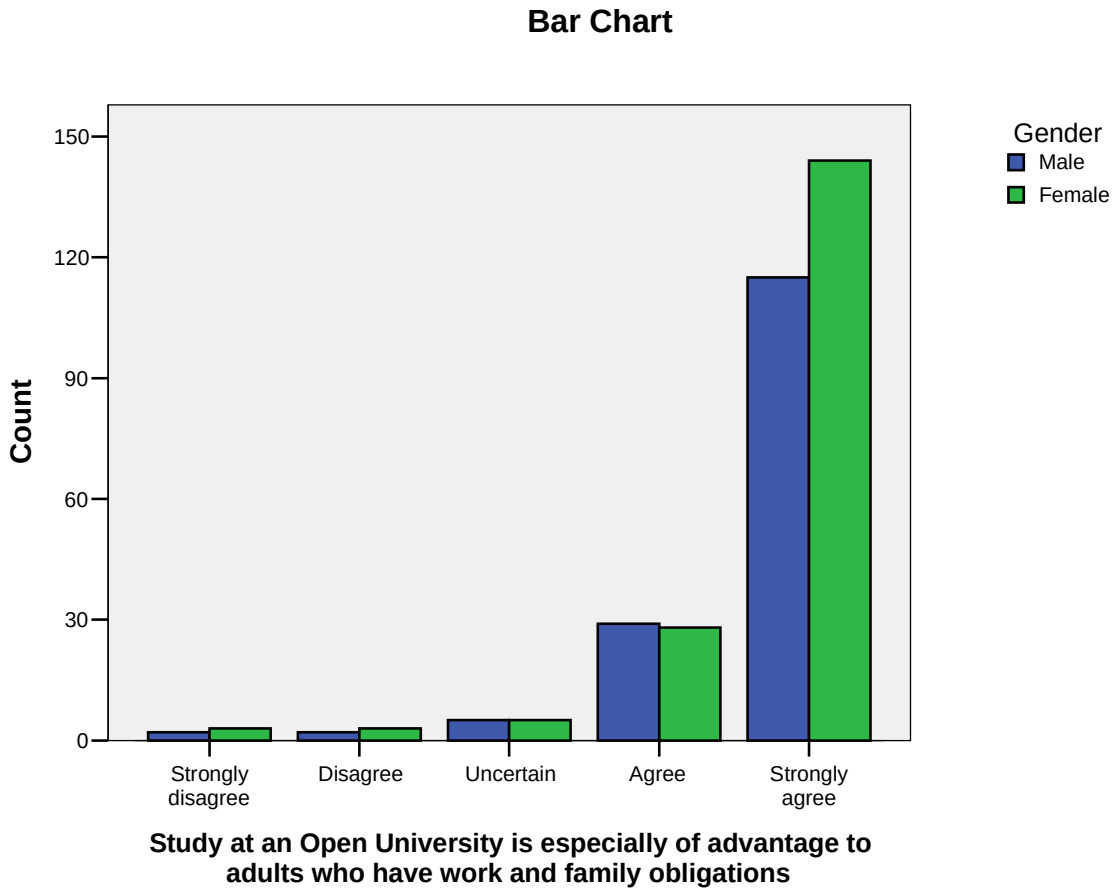
Crosstab

			Gender		
			Male	Female	Total
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	Count	2	3	5
		Expected Count	2,3	2,7	5,0
	Disagree	Count	2	3	5
		Expected Count	2,3	2,7	5,0
	Uncertain	Count	5	5	10
		Expected Count	4,6	5,4	10,0
	Agree	Count	29	28	57
		Expected Count	26,0	31,0	57,0
	Strongly agree	Count	115	144	259
		Expected Count	117,9	141,1	259,0
Total		Count	153	183	336
		Expected Count	153,0	183,0	336,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,994[a]	4	,911
Likelihood Ratio	,992	4	,911
Linear-by-Linear Association	,087	1	,768
N of Valid Cases	336		

a. 5 cells (50,0%) have expected count less than 5. The minimum expected count is 2,28.



B.7 Kreuztabelle zur Variablen Bildung

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
To what extent have you used advanced technological equipment in your professional life? * What is your level of education?	355	98,9%	4	1,1%	359	100,0%
Have you had to change your way of working because of technological developments? * What is your level of education?	353	98,3%	6	1,7%	359	100,0%
Thanks to technology, the problems of access to learning for students with disabilities have been resolved * What is your level of education?	356	99,2%	3	,8%	359	100,0%
Contacts between students and teachers can have the same intensity in online education as in face-to-face education * What is your level of education?	353	98,3%	6	1,7%	359	100,0%
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * What is your level of education?	354	98,6%	5	1,4%	359	100,0%
Only optimistic people think that the impact of technology on learning is beneficial * What is your level of education?	354	98,6%	5	1,4%	359	100,0%
From my personal study experience I find that the impact of technology on learning is valuable * What is your level of education?	354	98,6%	5	1,4%	359	100,0%
Information and communications technology has usually been used to encourage us to be active participants in learning * What is your level of education?	354	98,6%	5	1,4%	359	100,0%
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * What is your level of education?	355	98,9%	4	1,1%	359	100,0%

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * What is your level of education?	352	98,1%	7	1,9%	359	100,0%
Learning is enhanced when text and pictures are integrated in a multimedia environment * What is your level of education?	354	98,6%	5	1,4%	359	100,0%
Educational games motivate learners and contribute to developing skills such as teamwork * What is your level of education?	353	98,3%	6	1,7%	359	100,0%
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * What is your level of education?	333	92,8%	26	7,2%	359	100,0%
Technology facilitates easier access to material for those studying part-time * What is your level of education?	334	93,0%	25	7,0%	359	100,0%
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * What is your level of education?	333	92,8%	26	7,2%	359	100,0%
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * What is your level of education?	332	92,5%	27	7,5%	359	100,0%
Study at an Open University is especially of advantage to adults who have work and family obligations * What is your level of education?	334	93,0%	25	7,0%	359	100,0%

To what extent have you used advanced technological equipment in your professional life? * What is your level of education?

Crosstab

Count

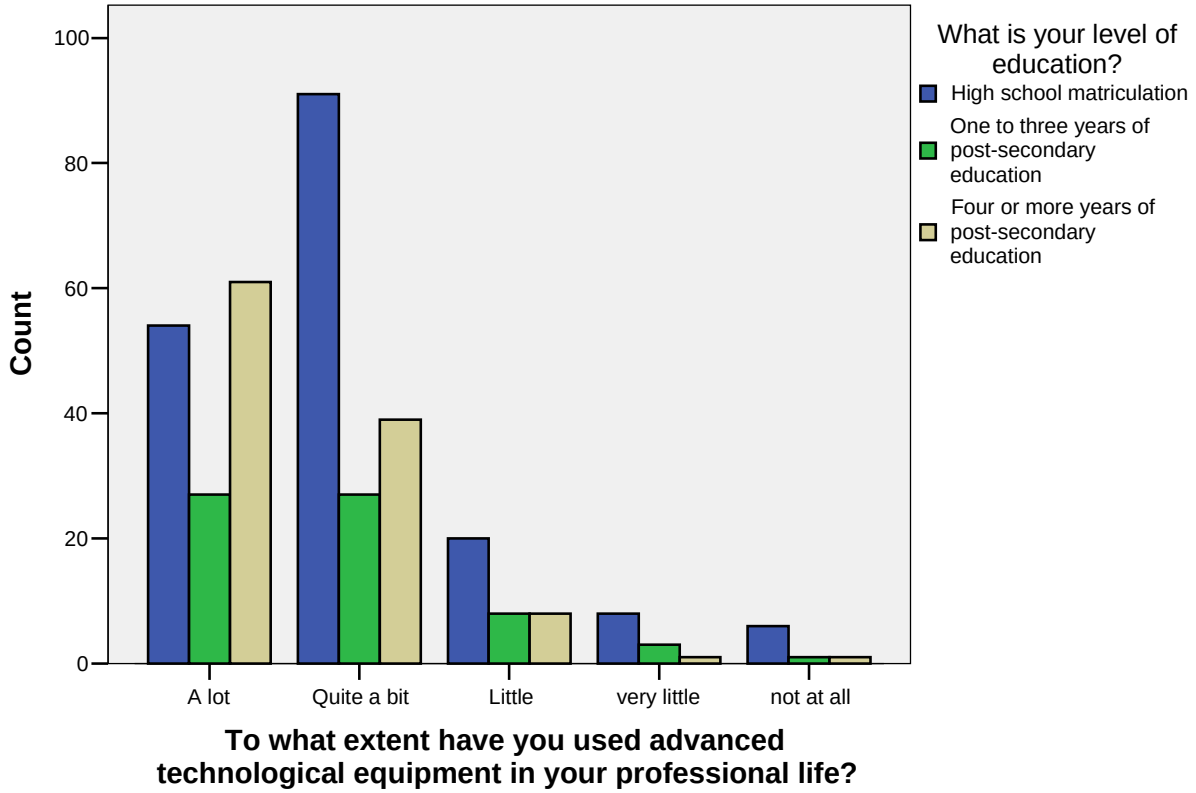
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
To what extent have you used advanced technological equipment in your professional life?	A lot	54	27	61	142
	Quite a bit	91	27	39	157
	Little	20	8	8	36
	very little	8	3	1	12
	not at all	6	1	1	8
Total		179	66	110	355

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20,972[a]	8	,007
Likelihood Ratio	21,698	8	,006
Linear-by-Linear Association	15,641	1	,000
N of Valid Cases	355		

a. 5 cells (33,3%) have expected count less than 5. The minimum expected count is 1,49.

Bar Chart



Have you had to change your way of working because of technological developments? * What is your level of education?

Crosstab

Count

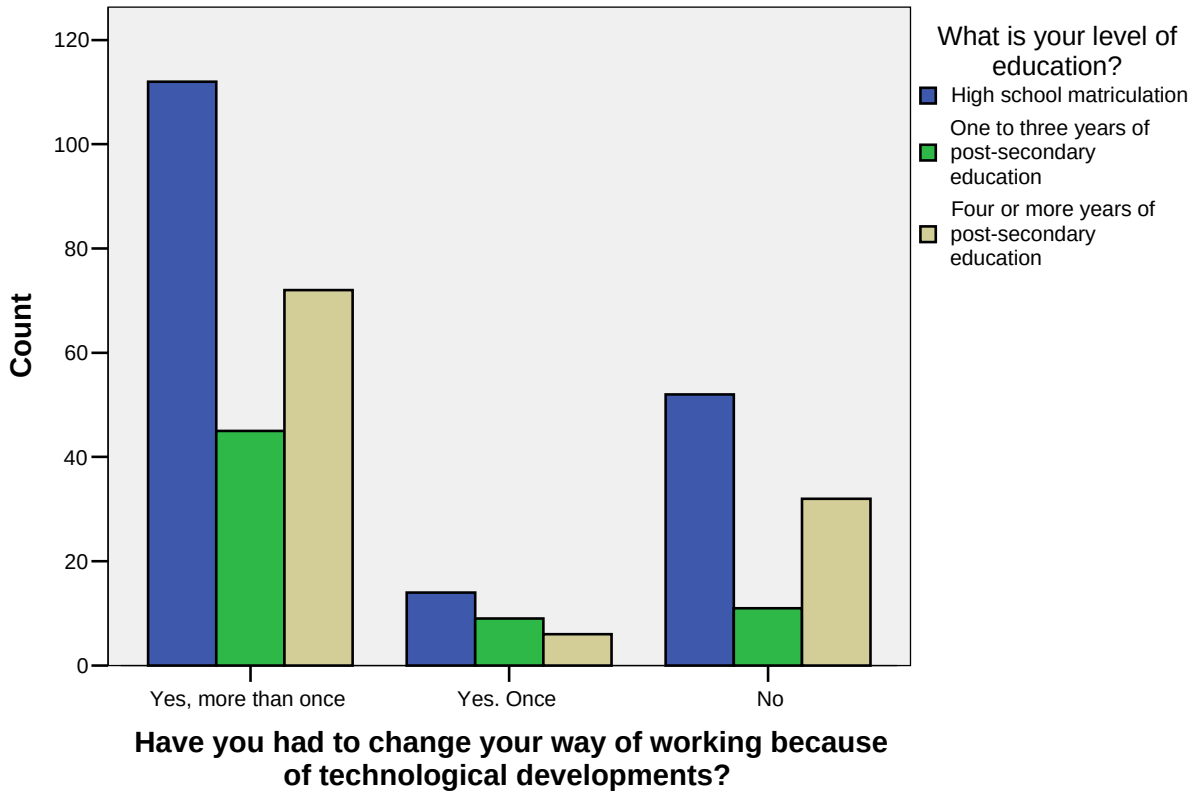
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Have you had to change your way of working because of technological developments?	Yes, more than once	112	45	72	229
	Yes. Once	14	9	6	29
	No	52	11	32	95
Total		178	65	110	353

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,811[a]	4	,146
Likelihood Ratio	6,869	4	,143
Linear-by-Linear Association	,158	1	,691
N of Valid Cases	353		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,34.

Bar Chart



Thanks to technology, the problems of access to learning for students with disabilities have been resolved * What is your level of education?

Crosstab

Count

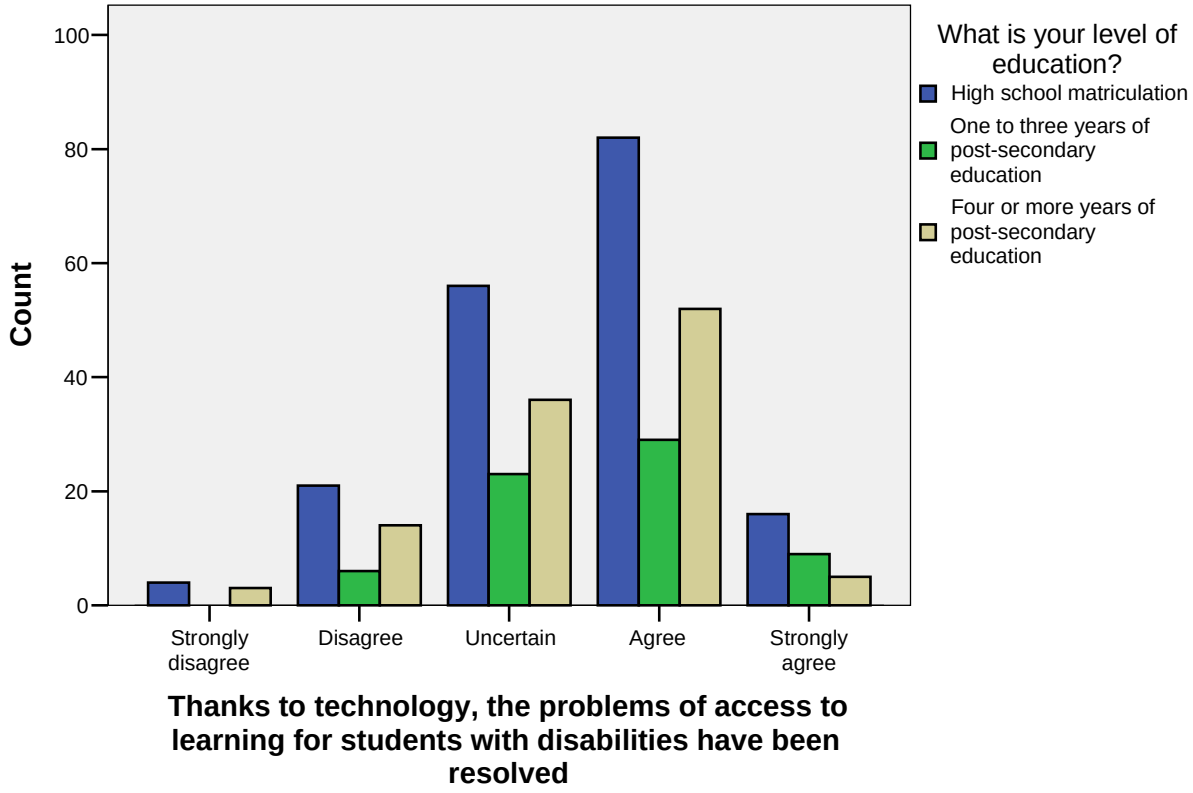
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	4	0	3	7
	Disagree	21	6	14	41
	Uncertain	56	23	36	115
	Agree	82	29	52	163
	Strongly agree	16	9	5	30
Total		179	67	110	356

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,544[a]	8	,587
Likelihood Ratio	7,942	8	,439
Linear-by-Linear Association	,515	1	,473
N of Valid Cases	356		

a. 3 cells (20,0%) have expected count less than 5. The minimum expected count is 1,32.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education * What is your level of

education?

Crosstab

Count

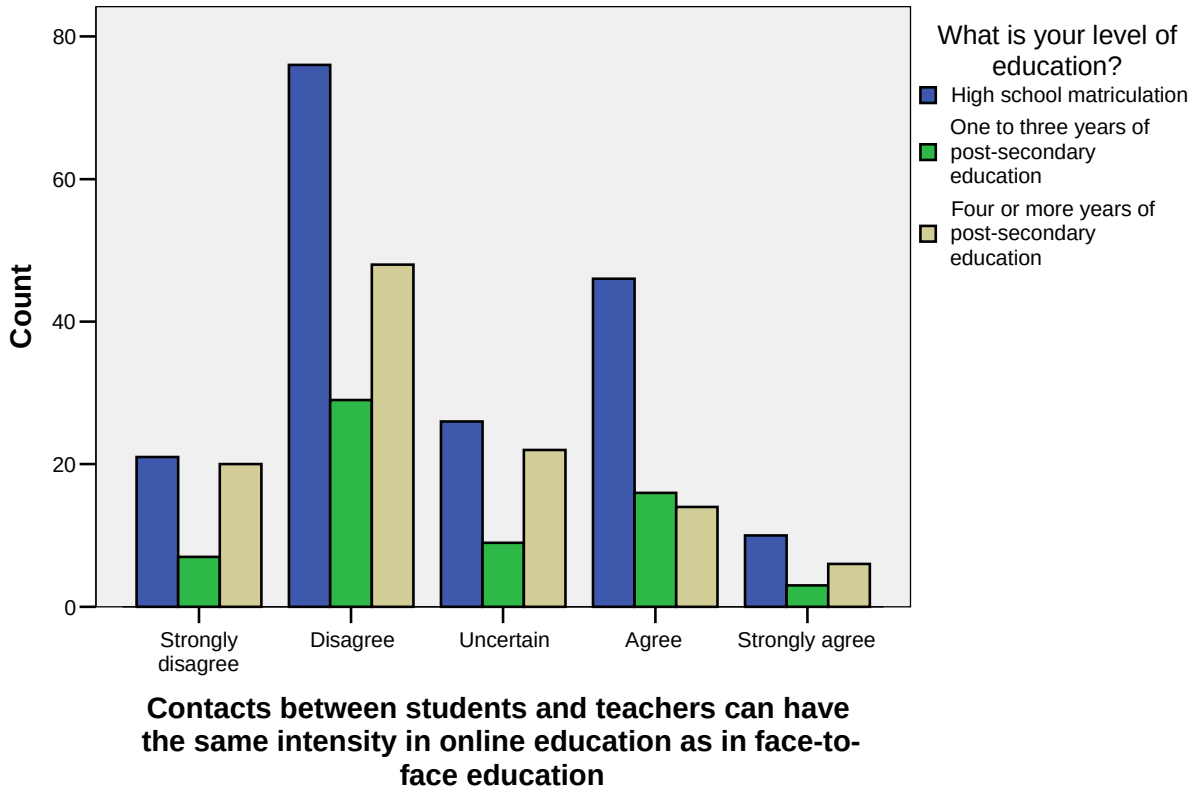
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	21	7	20	48
	Disagree	76	29	48	153
	Uncertain	26	9	22	57
	Agree	46	16	14	76
	Strongly agree	10	3	6	19
Total		179	64	110	353

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,892[a]	8	,273
Likelihood Ratio	10,307	8	,244
Linear-by-Linear Association	3,798	1	,051
N of Valid Cases	353		

a. 1 cells (6,7%) have expected count less than 5. The minimum expected count is 3,44.

Bar Chart



Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * What is your level of education?

Crosstab

Count

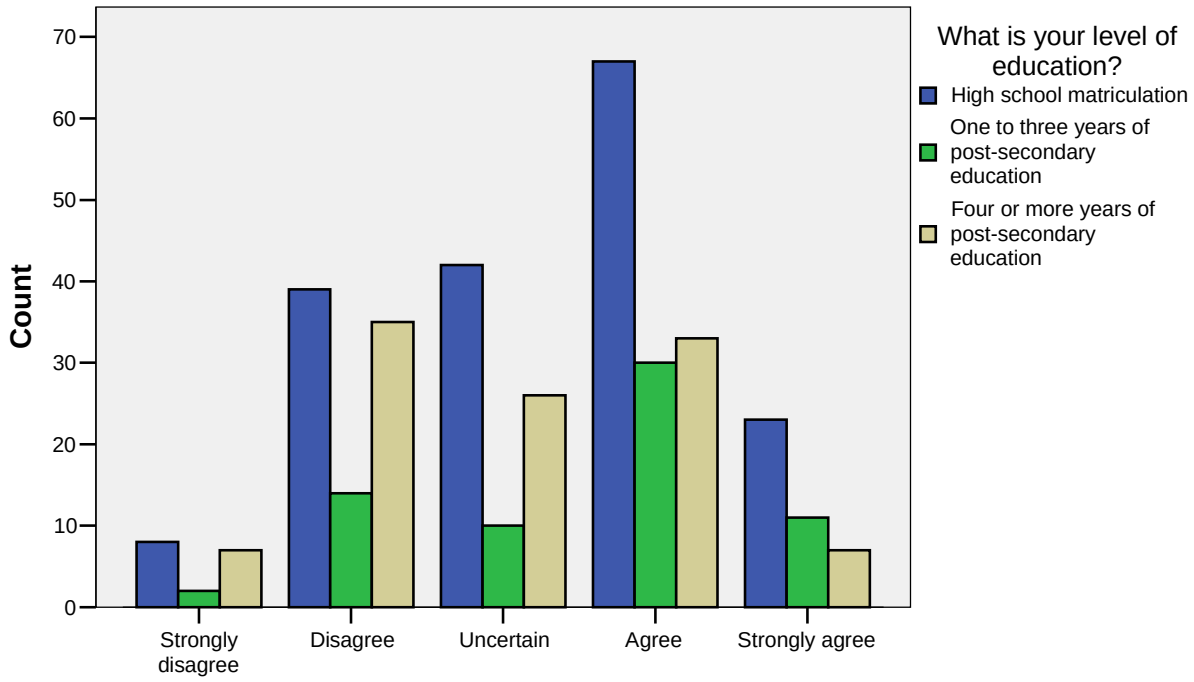
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	8	2	7	17
	Disagree	39	14	35	88
	Uncertain	42	10	26	78
	Agree	67	30	33	130
	Strongly agree	23	11	7	41
Total		179	67	108	354

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12,974[a]	8	,113
Likelihood Ratio	13,298	8	,102
Linear-by-Linear Association	5,332	1	,021
N of Valid Cases	354		

a. 1 cells (6,7%) have expected count less than 5. The minimum expected count is 3,22.

Bar Chart



Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Only optimistic people think that the impact of technology on learning is beneficial * What is your level of education?

Crosstab

Count

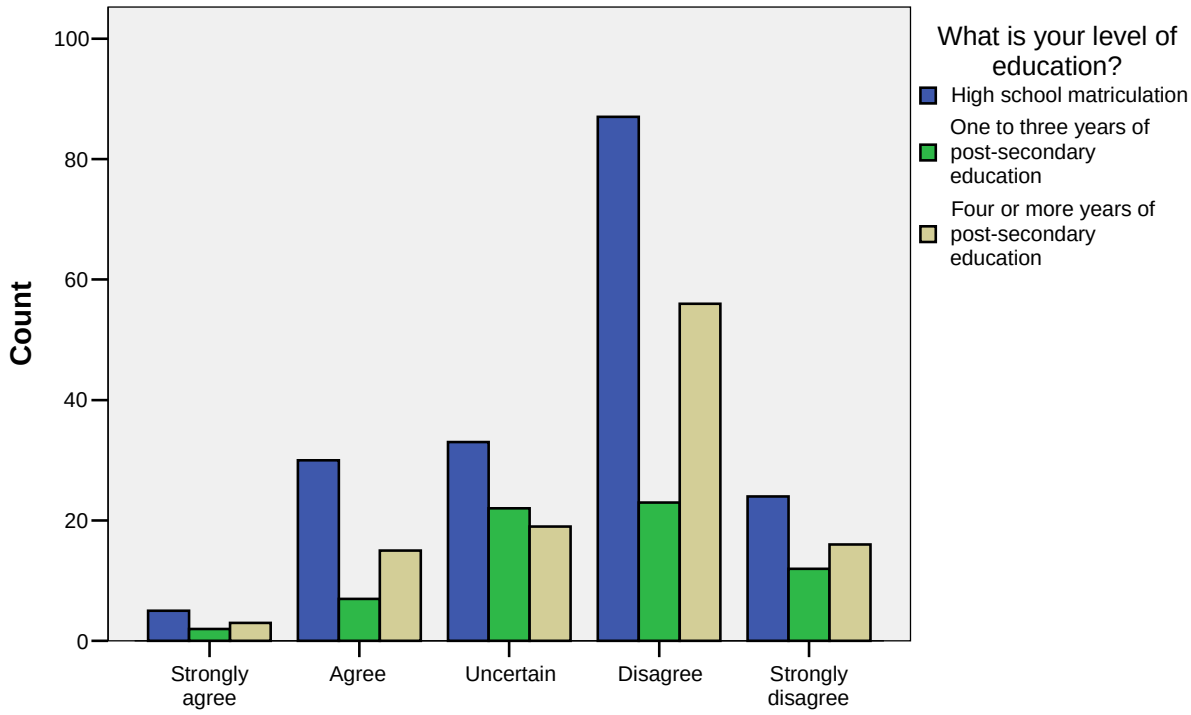
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	5	2	3	10
	Agree	30	7	15	52
	Uncertain	33	22	19	74
	Disagree	87	23	56	166
	Strongly disagree	24	12	16	52
Total		179	66	109	354

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10,745[a]	8	,217
Likelihood Ratio	10,264	8	,247
Linear-by-Linear Association	,451	1	,502
N of Valid Cases	354		

a. 2 cells (13,3%) have expected count less than 5. The minimum expected count is 1,86.

Bar Chart



Only optimistic people think that the impact of technology on learning is beneficial

From my personal study experience I find that the impact of technology on learning is valuable * What is your level of education?

Crosstab

Count

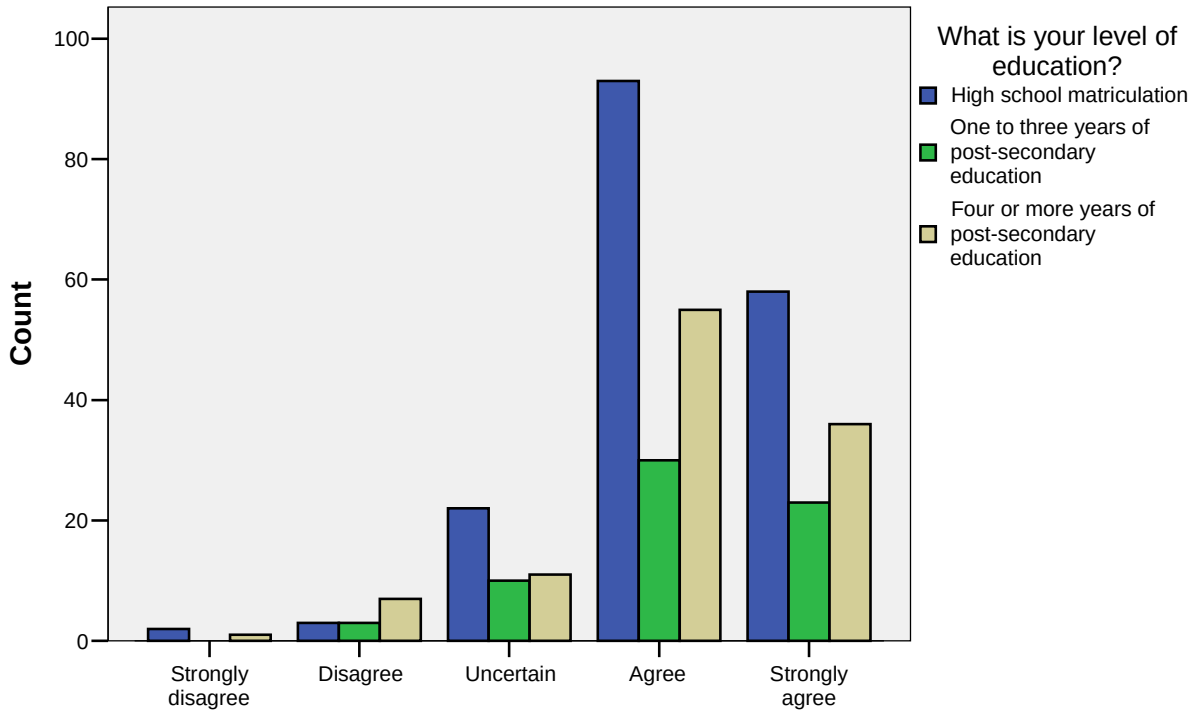
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	2	0	1	3
	Disagree	3	3	7	13
	Uncertain	22	10	11	43
	Agree	93	30	55	178
	Strongly agree	58	23	36	117
Total		178	66	110	354

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,383[a]	8	,604
Likelihood Ratio	7,009	8	,536
Linear-by-Linear Association	,396	1	,529
N of Valid Cases	354		

a. 5 cells (33,3%) have expected count less than 5. The minimum expected count is ,56.

Bar Chart



From my personal study experience I find that the impact of technology on learning is valuable

Information and communications technology has usually been used to encourage us to be active participants in learning * What is your level of education?

Crosstab

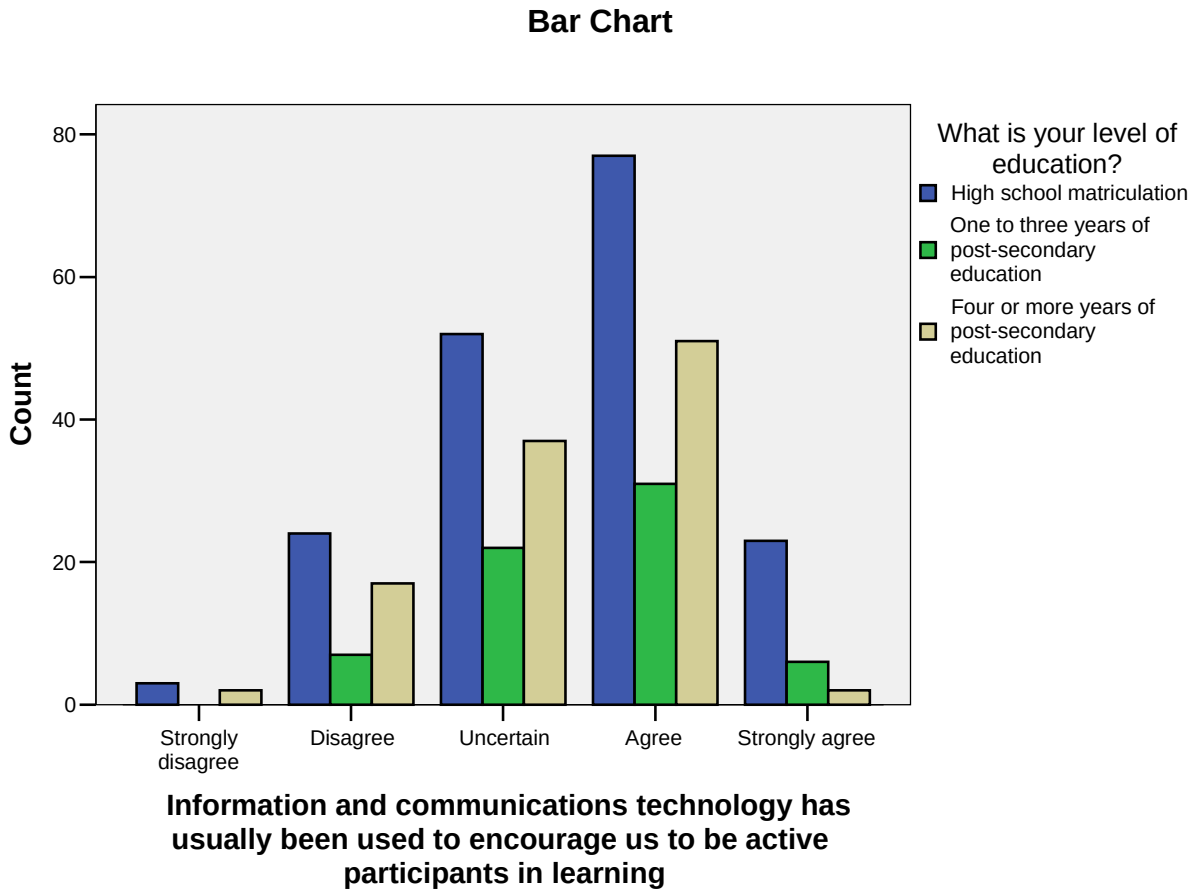
Count

		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	3	0	2	5
	Disagree	24	7	17	48
	Uncertain	52	22	37	111
	Agree	77	31	51	159
	Strongly agree	23	6	2	31
Total		179	66	109	354

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12,224[a]	8	,141
Likelihood Ratio	15,598	8	,049
Linear-by-Linear Association	3,343	1	,067
N of Valid Cases	354		

a. 3 cells (20,0%) have expected count less than 5. The minimum expected count is ,93.



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * What is your level of education?

Crosstab

Count

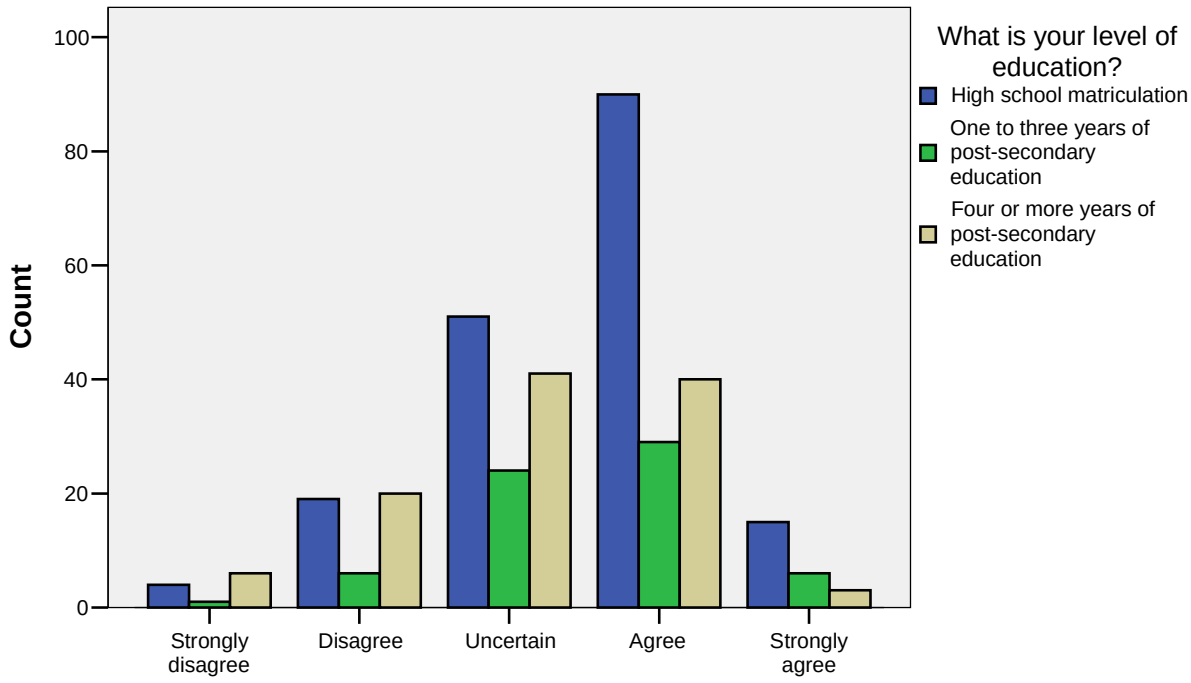
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	4	1	6	11
	Disagree	19	6	20	45
	Uncertain	51	24	41	116
	Agree	90	29	40	159
	Strongly agree	15	6	3	24
Total		179	66	110	355

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15,611[a]	8	,048
Likelihood Ratio	15,965	8	,043
Linear-by-Linear Association	11,930	1	,001
N of Valid Cases	355		

a. 3 cells (20,0%) have expected count less than 5. The minimum expected count is 2,05.

Bar Chart



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * What is your level of education?

Crosstab

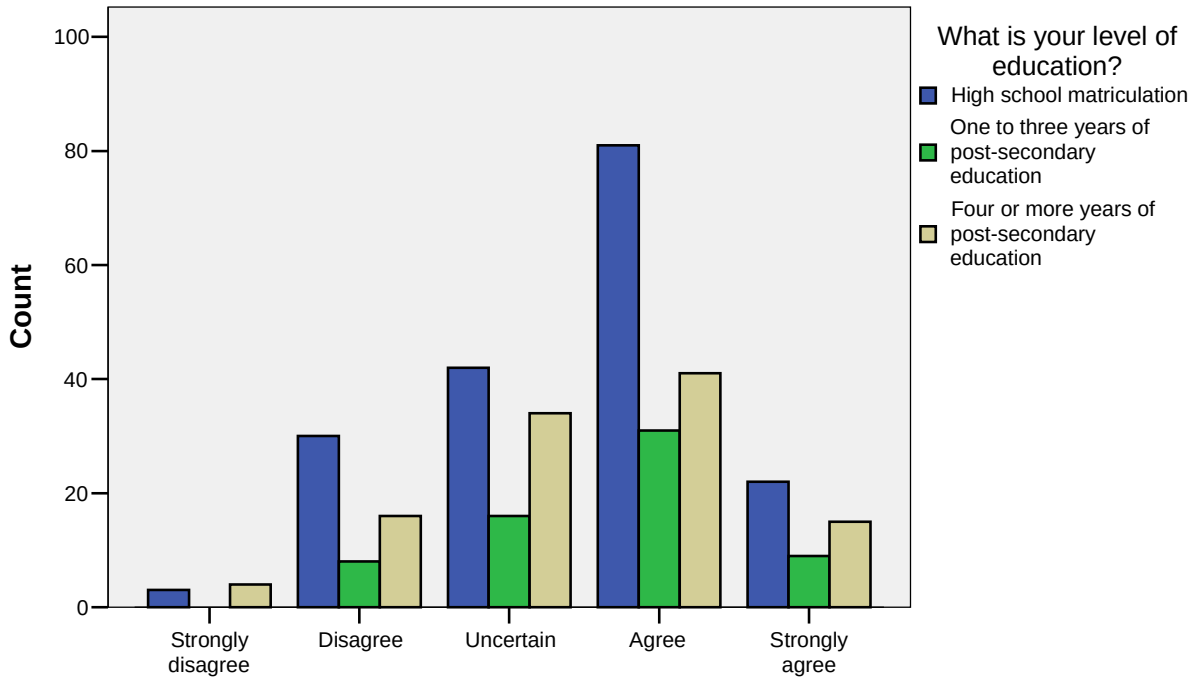
Count

		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	3	0	4	7
	Disagree	30	8	16	54
	Uncertain	42	16	34	92
	Agree	81	31	41	153
	Strongly agree	22	9	15	46
Total		178	64	110	352

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,583[a]	8	,582
Likelihood Ratio	7,573	8	,476
Linear-by-Linear Association	,236	1	,627
N of Valid Cases	352		

a. 3 cells (20,0%) have expected count less than 5. The minimum expected count is 1,27.



Learning is enhanced when text and pictures are integrated in a multimedia environment * What is your level of education?

Crosstab

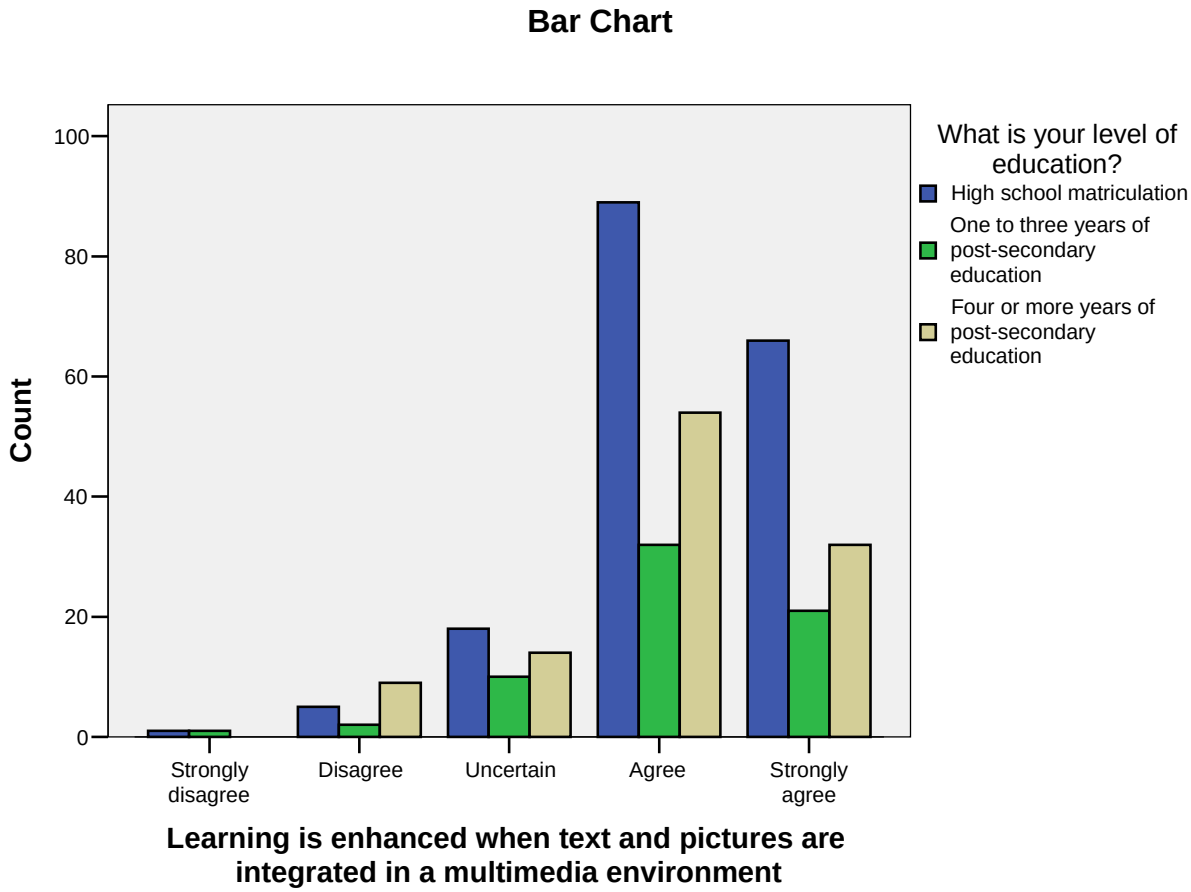
Count

		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	1	1	0	2
	Disagree	5	2	9	16
	Uncertain	18	10	14	42
	Agree	89	32	54	175
	Strongly agree	66	21	32	119
Total		179	66	109	354

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,957[a]	8	,346
Likelihood Ratio	8,785	8	,361
Linear-by-Linear Association	4,017	1	,045
N of Valid Cases	354		

a. 5 cells (33,3%) have expected count less than 5. The minimum expected count is ,37.



Educational games motivate learners and contribute to developing skills such as teamwork * What is your level of education?

Crosstab

Count

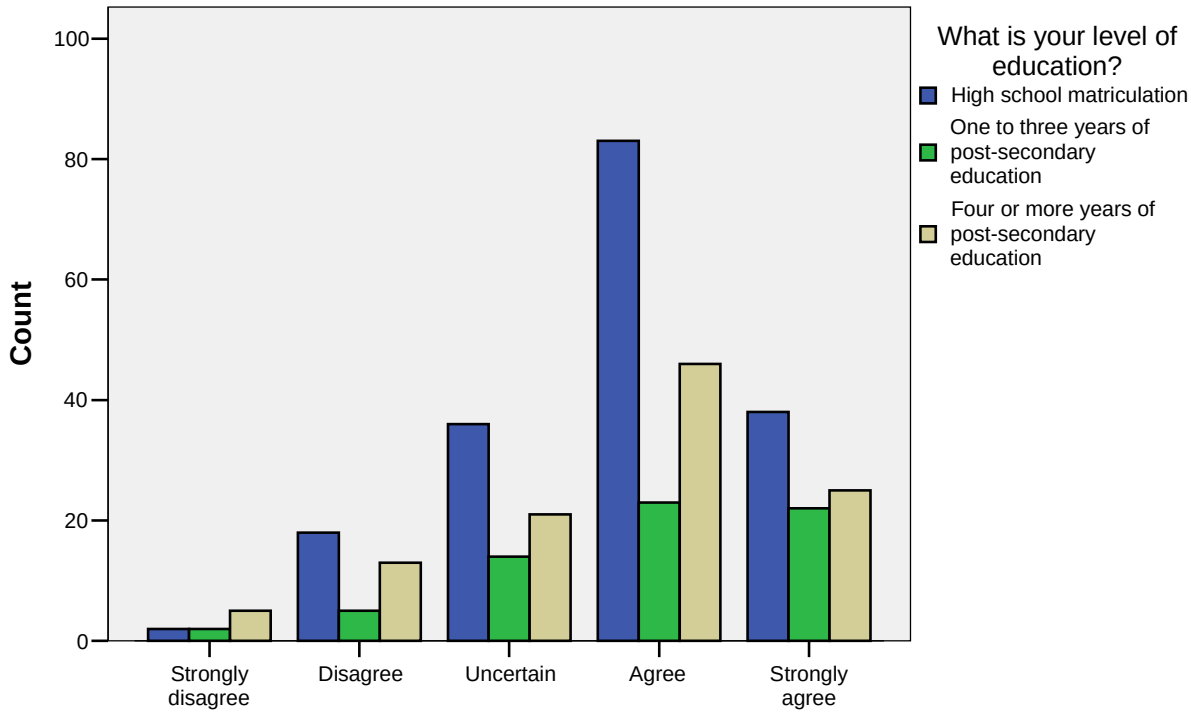
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	2	2	5	9
	Disagree	18	5	13	36
	Uncertain	36	14	21	71
	Agree	83	23	46	152
	Strongly agree	38	22	25	85
Total		177	66	110	353

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,616[a]	8	,376
Likelihood Ratio	8,509	8	,385
Linear-by-Linear Association	,614	1	,433
N of Valid Cases	353		

a. 3 cells (20,0%) have expected count less than 5. The minimum expected count is 1,68.

Bar Chart



Educational games motivate learners and contribute to developing skills such as teamwork

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * What is your level of education?

Crosstab

Count

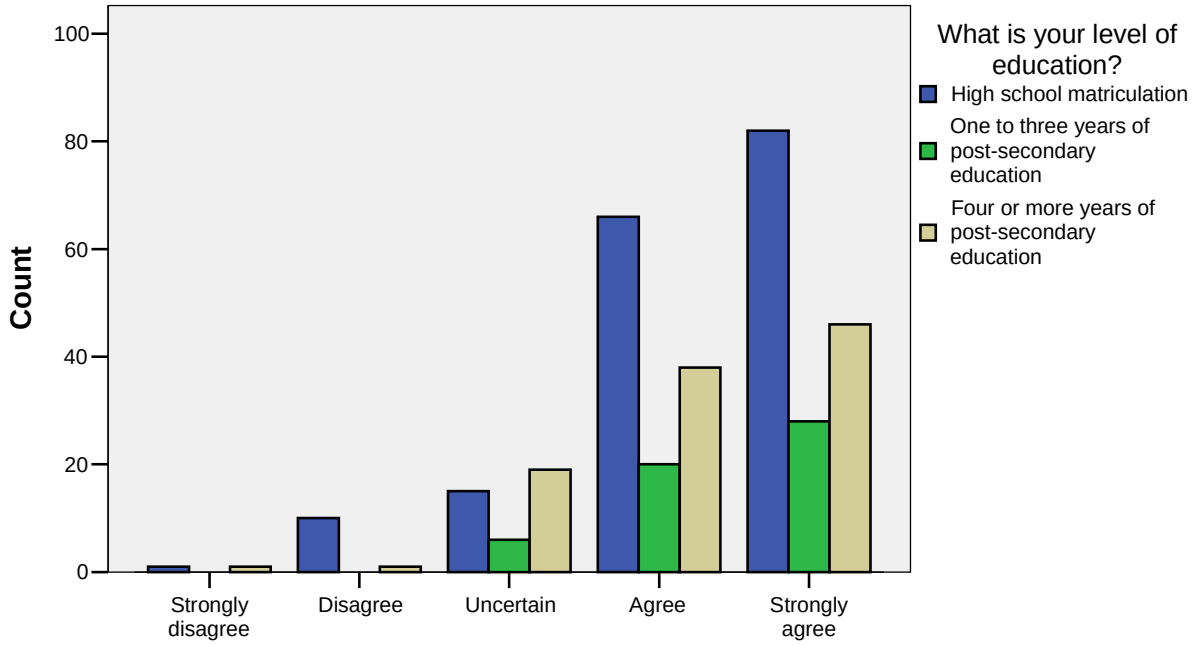
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	1	0	1	2
	Disagree	10	0	1	11
	Uncertain	15	6	19	40
	Agree	66	20	38	124
	Strongly agree	82	28	46	156
Total		174	54	105	333

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12,719[a]	8	,122
Likelihood Ratio	14,652	8	,066
Linear-by-Linear Association	,076	1	,783
N of Valid Cases	333		

a. 5 cells (33,3%) have expected count less than 5. The minimum expected count is ,32.

Bar Chart



The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Technology facilitates easier access to material for those studying part-time * What is your level of education?

Crosstab

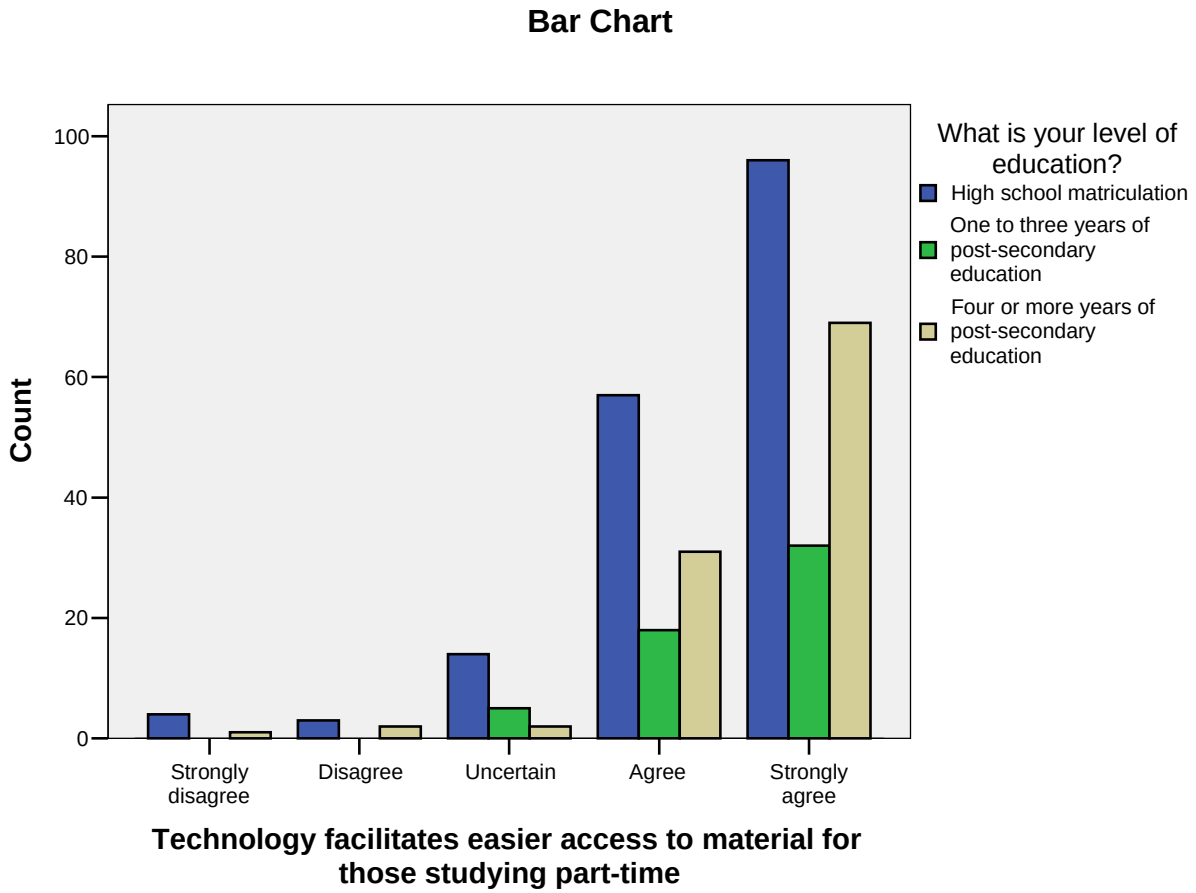
Count

		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Technology facilitates easier access to material for those studying part-time	Strongly disagree	4	0	1	5
	Disagree	3	0	2	5
	Uncertain	14	5	2	21
	Agree	57	18	31	106
	Strongly agree	96	32	69	197
Total		174	55	105	334

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,007[a]	8	,342
Likelihood Ratio	11,615	8	,169
Linear-by-Linear Association	4,332	1	,037
N of Valid Cases	334		

a. 7 cells (46,7%) have expected count less than 5. The minimum expected count is ,82.



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * What is your level of education?

Crosstab

Count

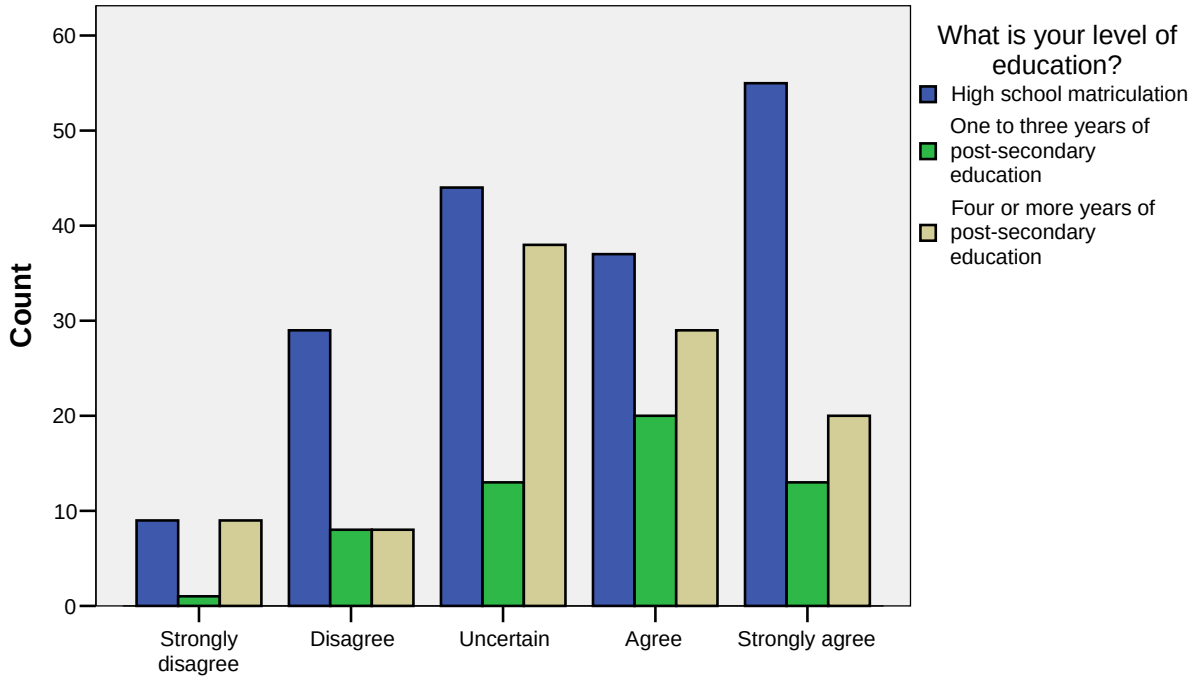
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	9	1	9	19
	Disagree	29	8	8	45
	Uncertain	44	13	38	95
	Agree	37	20	29	86
	Strongly agree	55	13	20	88
Total		174	55	104	333

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18,406[a]	8	,018
Likelihood Ratio	18,912	8	,015
Linear-by-Linear Association	1,023	1	,312
N of Valid Cases	333		

a. 1 cells (6,7%) have expected count less than 5. The minimum expected count is 3,14.

Bar Chart



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

There is no difference in learning outcomes between studying at an Open

University or at a traditional face-to-face university * What is your level of education?

Crosstab

Count

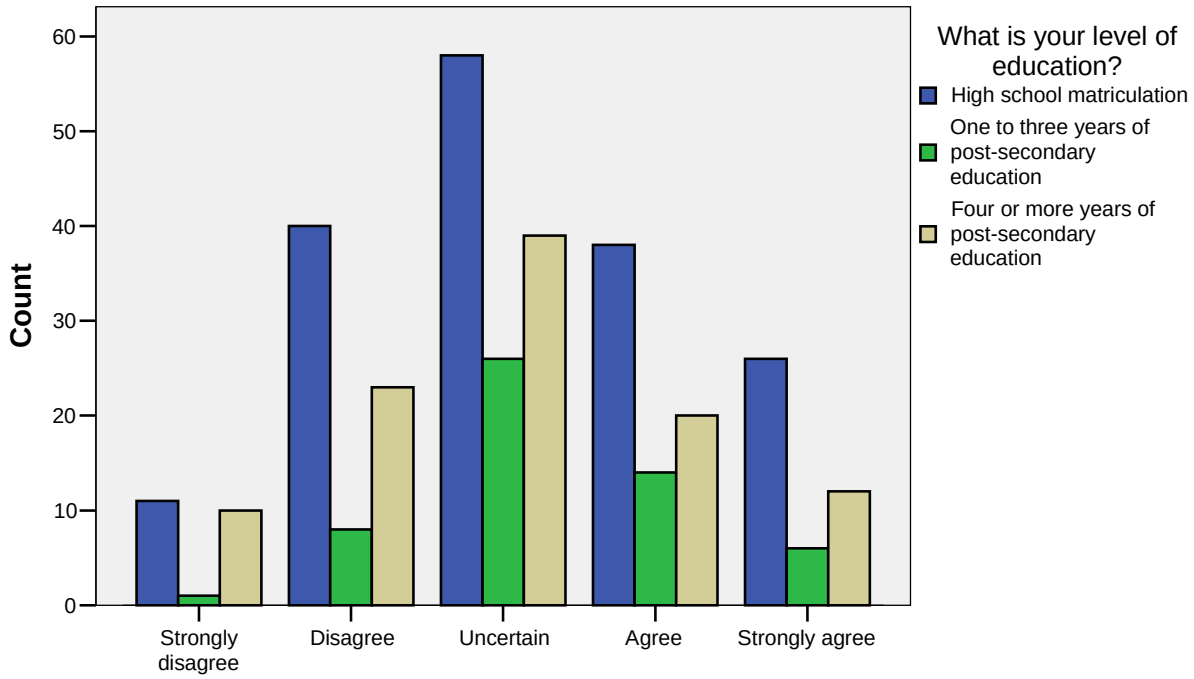
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	11	1	10	22
	Disagree	40	8	23	71
	Uncertain	58	26	39	123
	Agree	38	14	20	72
	Strongly agree	26	6	12	44
Total		173	55	104	332

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,476[a]	8	,388
Likelihood Ratio	9,128	8	,332
Linear-by-Linear Association	,979	1	,322
N of Valid Cases	332		

a. 1 cells (6,7%) have expected count less than 5. The minimum expected count is 3,64.

Bar Chart



There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Study at an Open University is especially of advantage to adults who have work and family obligations * What is your level of education?

Crosstab

Count

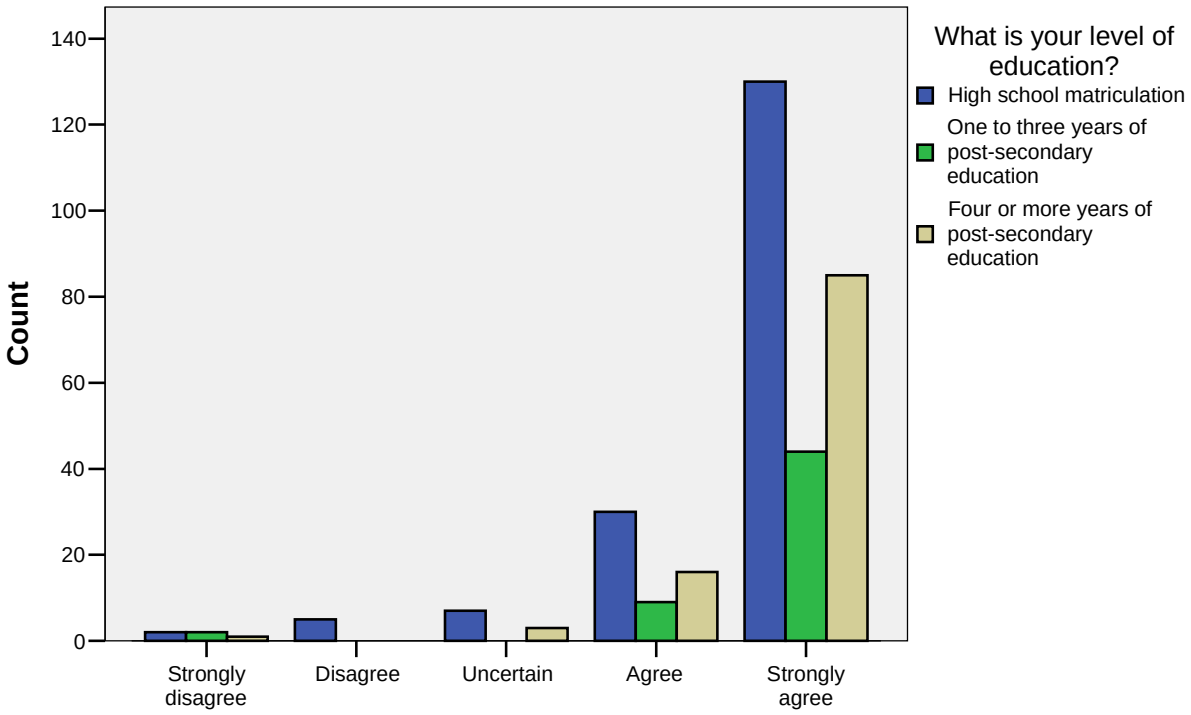
		What is your level of education?			
		High school matriculation	One to three years of post-secondary education	Four or more years of post-secondary education	Total
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	2	2	1	5
	Disagree	5	0	0	5
	Uncertain	7	0	3	10
	Agree	30	9	16	55
	Strongly agree	130	44	85	259
Total		174	55	105	334

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,436[a]	8	,307
Likelihood Ratio	12,506	8	,130
Linear-by-Linear Association	2,286	1	,131
N of Valid Cases	334		

a. 8 cells (53,3%) have expected count less than 5. The minimum expected count is ,82.

Bar Chart



Study at an Open University is especially of advantage to adults who have work and family obligations

B.8 Kreuztabelle zur Variablen Beruf

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
To what extent have you used advanced technological equipment in your professional life? * What is your occupation?	355	98,9%	4	1,1%	359	100,0%
Have you had to change your way of working because of technological developments? * What is your occupation?	353	98,3%	6	1,7%	359	100,0%
Thanks to technology, the problems of access to learning for students with disabilities have been resolved * What is your occupation?	357	99,4%	2	,6%	359	100,0%
Contacts between students and teachers can have the same intensity in online education as in face-to-face education * What is your occupation?	354	98,6%	5	1,4%	359	100,0%
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * What is your occupation?	355	98,9%	4	1,1%	359	100,0%
Only optimistic people think that the impact of technology on learning is beneficial * What is your occupation?	355	98,9%	4	1,1%	359	100,0%
From my personal study experience I find that the impact of technology on learning is valuable * What is your occupation?	355	98,9%	4	1,1%	359	100,0%
Information and communications technology has usually been used to encourage us to be active participants in learning * What is your occupation?	355	98,9%	4	1,1%	359	100,0%
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * What is your occupation?	356	99,2%	3	,8%	359	100,0%

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * What is your occupation?	354	98,6%	5	1,4%	359	100,0%
Learning is enhanced when text and pictures are integrated in a multimedia environment * What is your occupation?	355	98,9%	4	1,1%	359	100,0%
Educational games motivate learners and contribute to developing skills such as teamwork * What is your occupation?	354	98,6%	5	1,4%	359	100,0%
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * What is your occupation?	335	93,3%	24	6,7%	359	100,0%
Technology facilitates easier access to material for those studying part-time * What is your occupation?	336	93,6%	23	6,4%	359	100,0%
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * What is your occupation?	335	93,3%	24	6,7%	359	100,0%
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * What is your occupation?	334	93,0%	25	7,0%	359	100,0%
Study at an Open University is especially of advantage to adults who have work and family obligations * What is your occupation?	336	93,6%	23	6,4%	359	100,0%

To what extent have you used advanced technological equipment in your professional life? * What is your occupation?

Crosstab

			What is your occupation?			
			Manager	Technical	Teacher or Trainer	Student
To what extent have you used advanced technological equipment in your professional life?	A lot	Count	31	39	35	14
		Expected Count	26,8	23,5	33,3	30,0
	Quite a bit	Count	28	15	40	34
		Expected Count	29,0	25,5	36,0	32,5
	Little	Count	6	1	4	16
		Expected Count	6,5	5,7	8,1	7,3
	very little	Count	1	1	2	7
		Expected Count	2,2	2,0	2,8	2,5
	not at all	Count	0	2	1	3
		Expected Count	1,5	1,3	1,8	1,7
Total		Count	66	58	82	74
		Expected Count	66,0	58,0	82,0	74,0

Crosstab

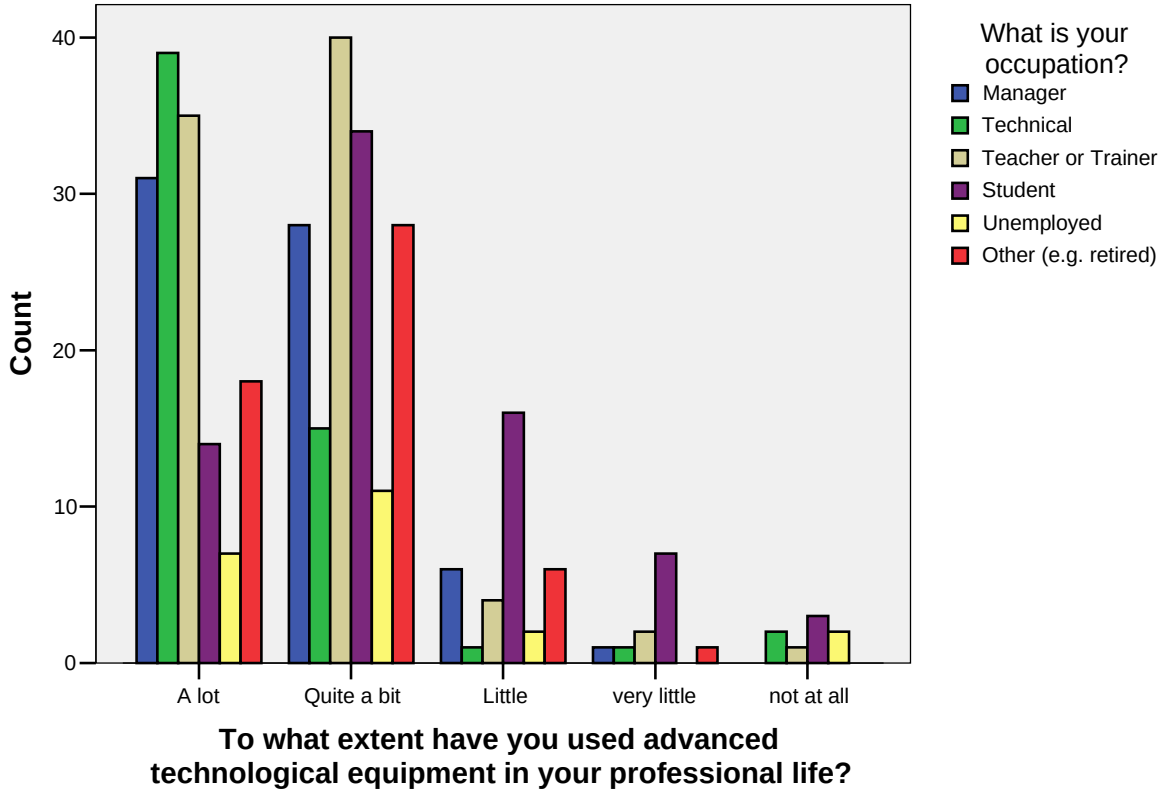
			What is your occupation?		
			Unemployed	Other (e.g. retired)	Total
To what extent have you used advanced technological equipment in your professional life?	A lot	Count	7	18	144
		Expected Count	8,9	21,5	144,0
	Quite a bit	Count	11	28	156
		Expected Count	9,7	23,3	156,0
	Little	Count	2	6	35
		Expected Count	2,2	5,2	35,0
	very little	Count	0	1	12
		Expected Count	,7	1,8	12,0
	not at all	Count	2	0	8
		Expected Count	,5	1,2	8,0
Total		Count	22	53	355
		Expected Count	22,0	53,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	62,580[a]	20	,000
Likelihood Ratio	62,527	20	,000
Linear-by-Linear Association	10,100	1	,001
N of Valid Cases	355		

a. 13 cells (43,3%) have expected count less than 5. The minimum expected count is ,50.

Bar Chart



Have you had to change your way of working because of technological developments? * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Have you had to change your way of working because of technological developments?	Yes, more than once	Count	48	43	52
		Expected Count	43,2	38,0	53,0
	Yes. Once	Count	6	4	9
		Expected Count	5,4	4,8	6,7
	No	Count	12	11	20
		Expected Count	17,4	15,3	21,3
Total		Count	66	58	81
		Expected Count	66,0	58,0	81,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Have you had to change your way of working because of technological developments?	Yes, more than once	Count	40	10
		Expected Count	47,8	14,4
	Yes. Once	Count	4	3
		Expected Count	6,0	1,8
	No	Count	29	9
		Expected Count	19,2	5,8
Total		Count	73	22
		Expected Count	73,0	22,0

Crosstab

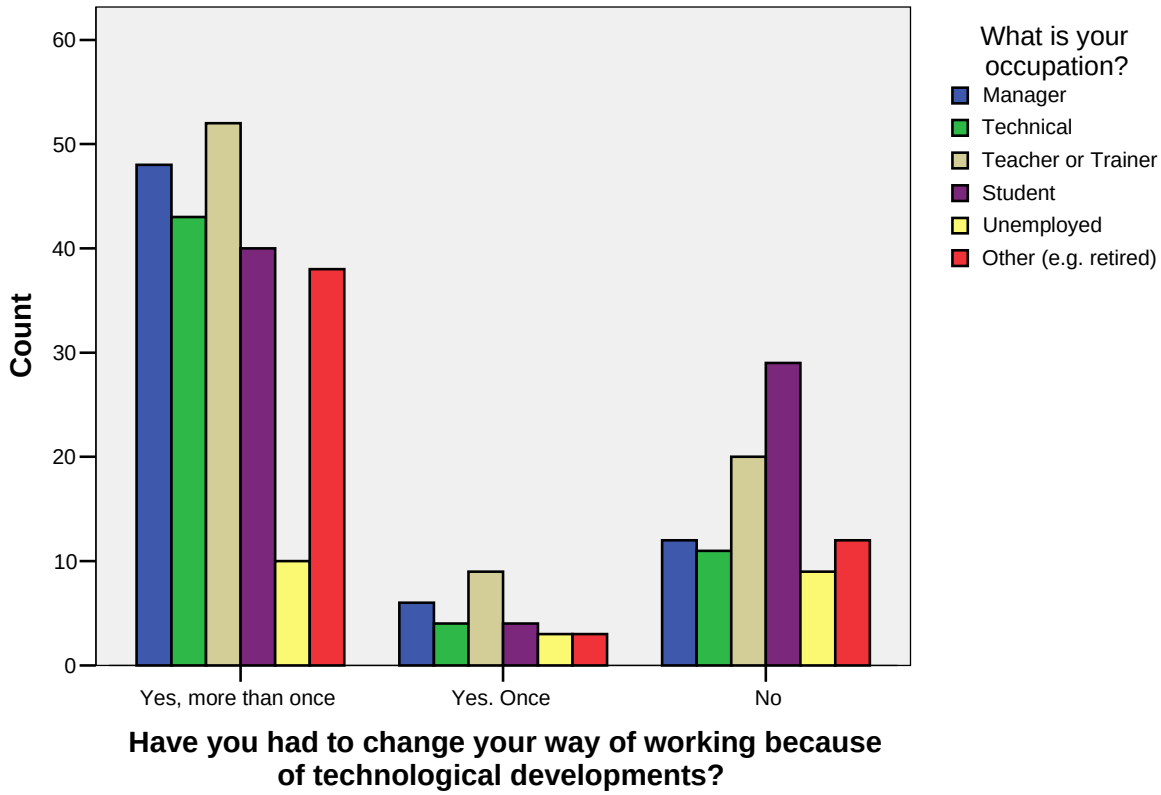
			What is Other (e.g. retired)	Total
Have you had to change your way of working because of technological developments?	Yes, more than once	Count	38	231
		Expected Count	34,7	231,0
	Yes. Once	Count	3	29
		Expected Count	4,4	29,0
	No	Count	12	93
		Expected Count	14,0	93,0
Total		Count	53	353
		Expected Count	53,0	353,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16,995[a]	10	,074
Likelihood Ratio	16,526	10	,086
Linear-by-Linear Association	3,017	1	,082
N of Valid Cases	353		

a. 3 cells (16,7%) have expected count less than 5. The minimum expected count is 1,81.

Bar Chart



Have you had to change your way of working because of technological developments?

Thanks to technology, the problems of access to learning for students with disabilities have been resolved * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	Count	1	1	1
		Expected Count	1,3	1,1	1,6
	Disagree	Count	6	5	7
		Expected Count	7,8	6,8	9,6
	Uncertain	Count	26	22	25
		Expected Count	21,4	18,8	26,6
	Agree	Count	29	26	38
		Expected Count	30,1	26,5	37,4
	Strongly agree	Count	4	4	11
		Expected Count	5,4	4,7	6,7
Total		Count	66	58	82
		Expected Count	66,0	58,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	Count	3	1
		Expected Count	1,5	,5
	Disagree	Count	19	2
		Expected Count	8,8	2,7
	Uncertain	Count	24	3
		Expected Count	24,4	7,5
	Agree	Count	27	11
		Expected Count	34,2	10,5
	Strongly agree	Count	2	6
		Expected Count	6,1	1,9
Total		Count	75	23
		Expected Count	75,0	23,0

Crosstab

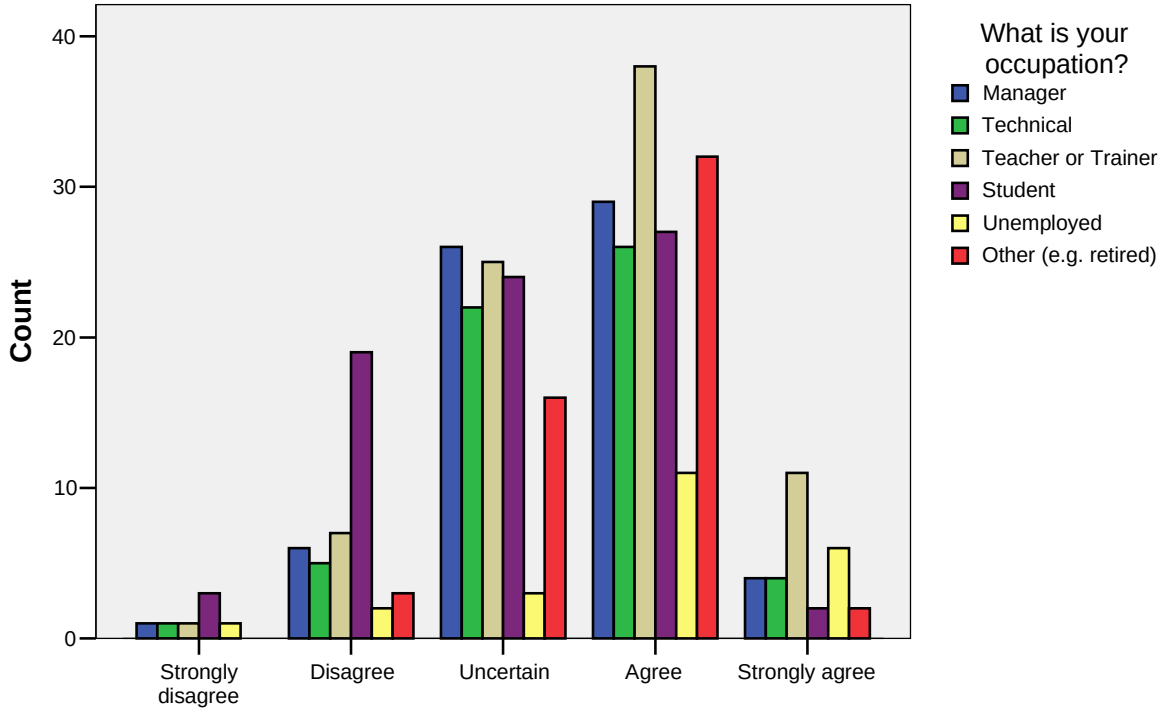
			What is Other (e.g. retired)	Total
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Strongly disagree	Count	0	7
		Expected Count	1,0	7,0
	Disagree	Count	3	42
		Expected Count	6,2	42,0
	Uncertain	Count	16	116
		Expected Count	17,2	116,0
	Agree	Count	32	163
		Expected Count	24,2	163,0
	Strongly agree	Count	2	29
		Expected Count	4,3	29,0
Total		Count	53	357
		Expected Count	53,0	357,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	43,723[a]	20	,002
Likelihood Ratio	39,955	20	,005
Linear-by-Linear Association	,372	1	,542
N of Valid Cases	357		

a. 10 cells (33,3%) have expected count less than 5. The minimum expected count is ,45.

Bar Chart



Thanks to technology, the problems of access to learning for students with disabilities have been resolved

Contacts between students and teachers can have the same intensity in online education as in face-to-face education * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	Count	7	11	17
		Expected Count	8,8	7,9	11,1
	Disagree	Count	24	23	42
		Expected Count	28,5	25,4	35,9
	Uncertain	Count	13	13	9
		Expected Count	10,5	9,3	13,2
	Agree	Count	19	8	12
		Expected Count	13,8	12,3	17,4
	Strongly agree	Count	2	3	2
		Expected Count	3,5	3,1	4,4
Total		Count	65	58	82
		Expected Count	65,0	58,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	Count	10	2
		Expected Count	10,2	2,8
	Disagree	Count	39	7
		Expected Count	32,8	9,2
	Uncertain	Count	8	3
		Expected Count	12,1	3,4
	Agree	Count	13	7
		Expected Count	15,9	4,4
	Strongly agree	Count	5	2
		Expected Count	4,0	1,1
Total		Count	75	21
		Expected Count	75,0	21,0

Crosstab

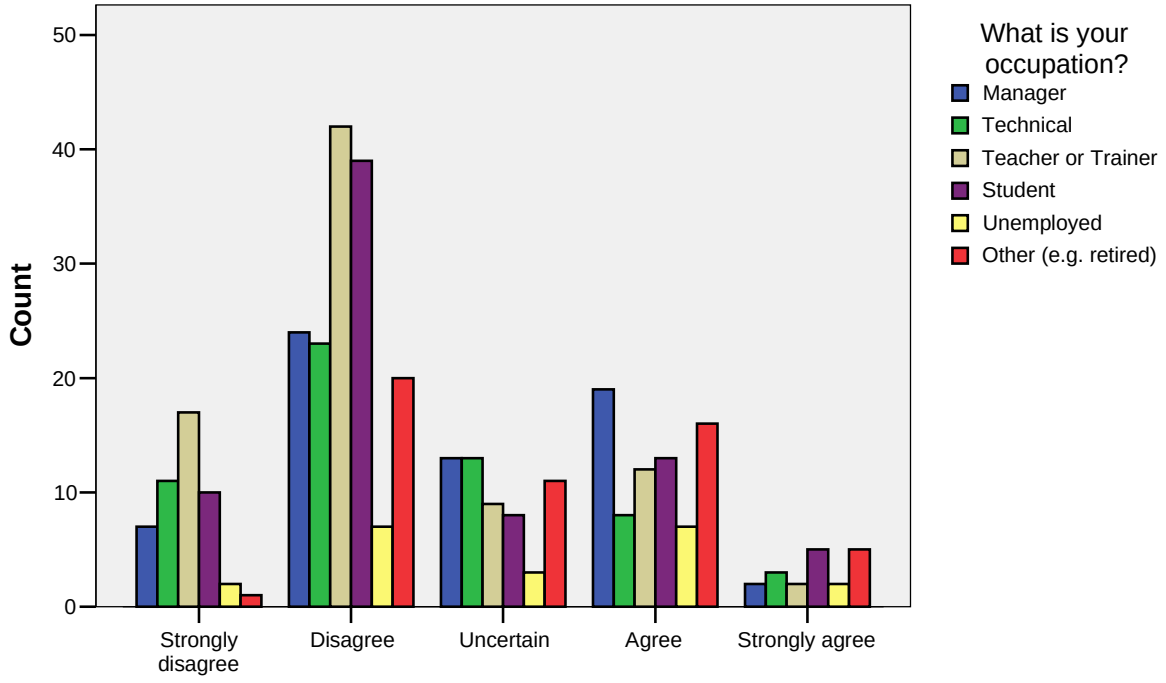
			What is Other (e.g. retired)	Total
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Strongly disagree	Count	1	48
		Expected Count	7,2	48,0
	Disagree	Count	20	155
		Expected Count	23,2	155,0
	Uncertain	Count	11	57
		Expected Count	8,5	57,0
	Agree	Count	16	75
		Expected Count	11,2	75,0
	Strongly agree	Count	5	19
		Expected Count	2,8	19,0
Total		Count	53	354
		Expected Count	53,0	354,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33,569[a]	20	,029
Likelihood Ratio	36,035	20	,015
Linear-by-Linear Association	4,335	1	,037
N of Valid Cases	354		

a. 9 cells (30,0%) have expected count less than 5. The minimum expected count is 1,13.

Bar Chart



Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	Count	1	2	6
		Expected Count	3,1	2,7	3,9
	Disagree	Count	13	18	19
		Expected Count	16,3	14,3	20,6
	Uncertain	Count	17	19	13
		Expected Count	14,1	12,4	17,8
	Agree	Count	28	11	40
		Expected Count	24,0	21,0	30,3
	Strongly agree	Count	6	7	4
		Expected Count	7,5	6,6	9,5
Total		Count	65	57	82
		Expected Count	65,0	57,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	Count	5	2
		Expected Count	3,6	1,1
	Disagree	Count	25	2
		Expected Count	18,8	5,8
	Uncertain	Count	14	7
		Expected Count	16,3	5,0
	Agree	Count	22	8
		Expected Count	27,7	8,5
	Strongly agree	Count	9	4
		Expected Count	8,7	2,7
Total		Count	75	23
		Expected Count	75,0	23,0

Crosstab

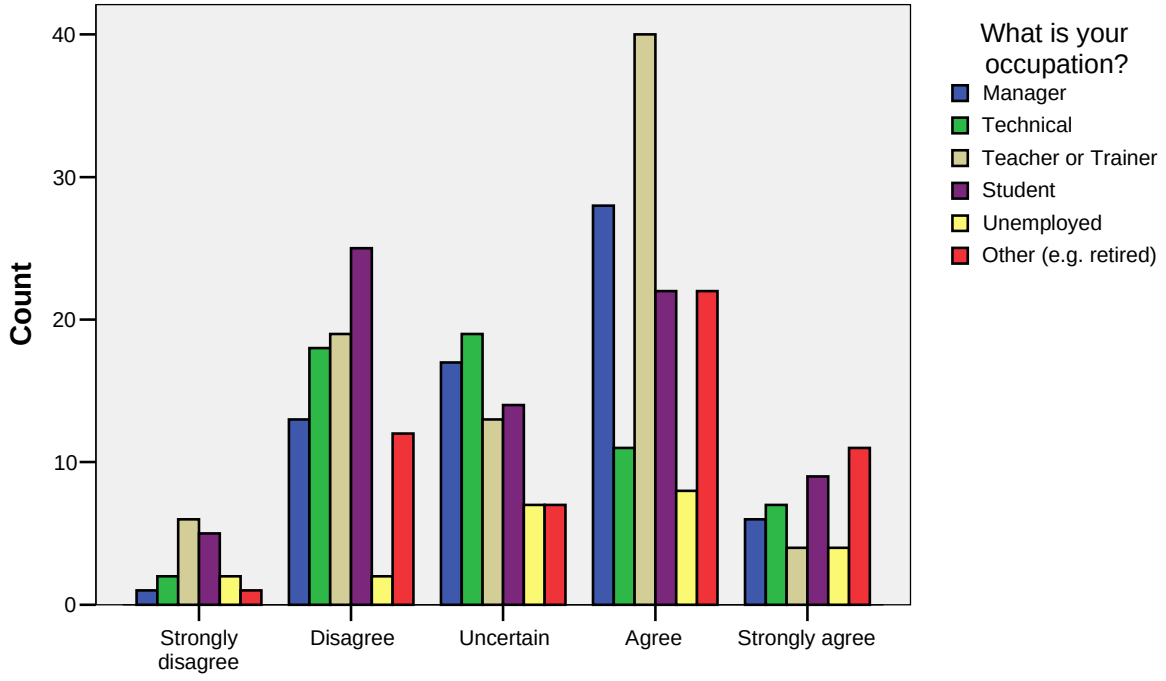
			What is Other (e.g. retired)	Total
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Strongly disagree	Count	1	17
		Expected Count	2,5	17,0
	Disagree	Count	12	89
		Expected Count	13,3	89,0
	Uncertain	Count	7	77
		Expected Count	11,5	77,0
	Agree	Count	22	131
		Expected Count	19,6	131,0
	Strongly agree	Count	11	41
		Expected Count	6,1	41,0
Total		Count	53	355
		Expected Count	53,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37,810[a]	20	,009
Likelihood Ratio	39,539	20	,006
Linear-by-Linear Association	1,300	1	,254
N of Valid Cases	355		

a. 8 cells (26,7%) have expected count less than 5. The minimum expected count is 1,10.

Bar Chart



Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Only optimistic people think that the impact of technology on learning is beneficial * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	Count	1	1	3
		Expected Count	1,8	1,6	2,3
	Agree	Count	4	12	12
		Expected Count	9,5	8,5	12,0
	Uncertain	Count	12	12	21
		Expected Count	13,2	11,8	16,6
	Disagree	Count	40	23	38
		Expected Count	30,9	27,6	39,0
	Strongly disagree	Count	8	10	8
		Expected Count	9,5	8,5	12,0
Total		Count	65	58	82
		Expected Count	65,0	58,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	Count	3	1
		Expected Count	2,1	,6
	Agree	Count	17	5
		Expected Count	10,8	3,4
	Uncertain	Count	11	3
		Expected Count	15,0	4,7
	Disagree	Count	37	8
		Expected Count	35,2	10,9
	Strongly disagree	Count	6	6
		Expected Count	10,8	3,4
Total		Count	74	23
		Expected Count	74,0	23,0

Crosstab

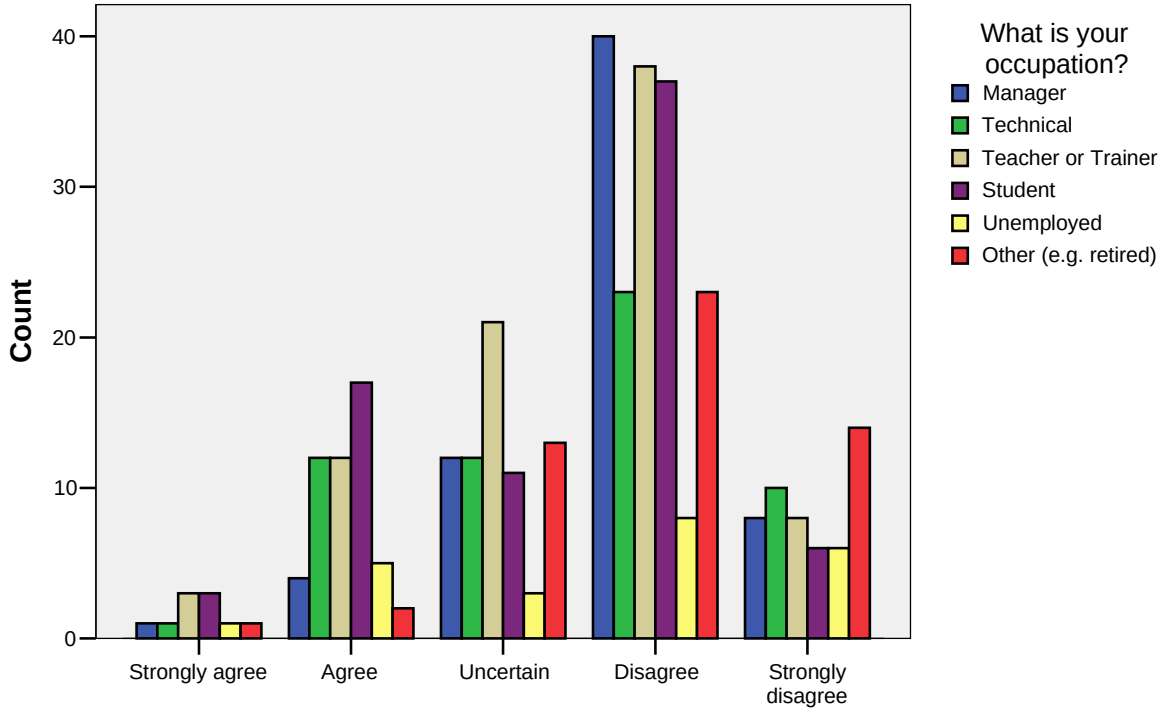
			What is	
			Other (e.g. retired)	Total
Only optimistic people think that the impact of technology on learning is beneficial	Strongly agree	Count	1	10
		Expected Count	1,5	10,0
	Agree	Count	2	52
		Expected Count	7,8	52,0
	Uncertain	Count	13	72
		Expected Count	10,7	72,0
	Disagree	Count	23	169
		Expected Count	25,2	169,0
	Strongly disagree	Count	14	52
		Expected Count	7,8	52,0
Total		Count	53	355
		Expected Count	53,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33,800[a]	20	,028
Likelihood Ratio	35,005	20	,020
Linear-by-Linear Association	,165	1	,684
N of Valid Cases	355		

a. 9 cells (30,0%) have expected count less than 5. The minimum expected count is ,65.

Bar Chart



Only optimistic people think that the impact of technology on learning is beneficial

From my personal study experience I find that the impact of technology on learning is valuable * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	Count	1	0	0
		Expected Count	,5	,5	,7
	Disagree	Count	3	2	2
		Expected Count	2,4	2,1	3,0
	Uncertain	Count	2	10	11
		Expected Count	7,9	7,0	9,9
	Agree	Count	34	26	43
		Expected Count	32,8	29,2	41,3
	Strongly agree	Count	25	20	26
		Expected Count	21,4	19,1	27,0
Total		Count	65	58	82
		Expected Count	65,0	58,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	Count	2	0
		Expected Count	,6	,2
	Disagree	Count	5	1
		Expected Count	2,7	,8
	Uncertain	Count	7	3
		Expected Count	9,1	2,7
	Agree	Count	38	14
		Expected Count	37,8	11,1
	Strongly agree	Count	23	4
		Expected Count	24,7	7,3
Total		Count	75	22
		Expected Count	75,0	22,0

Crosstab

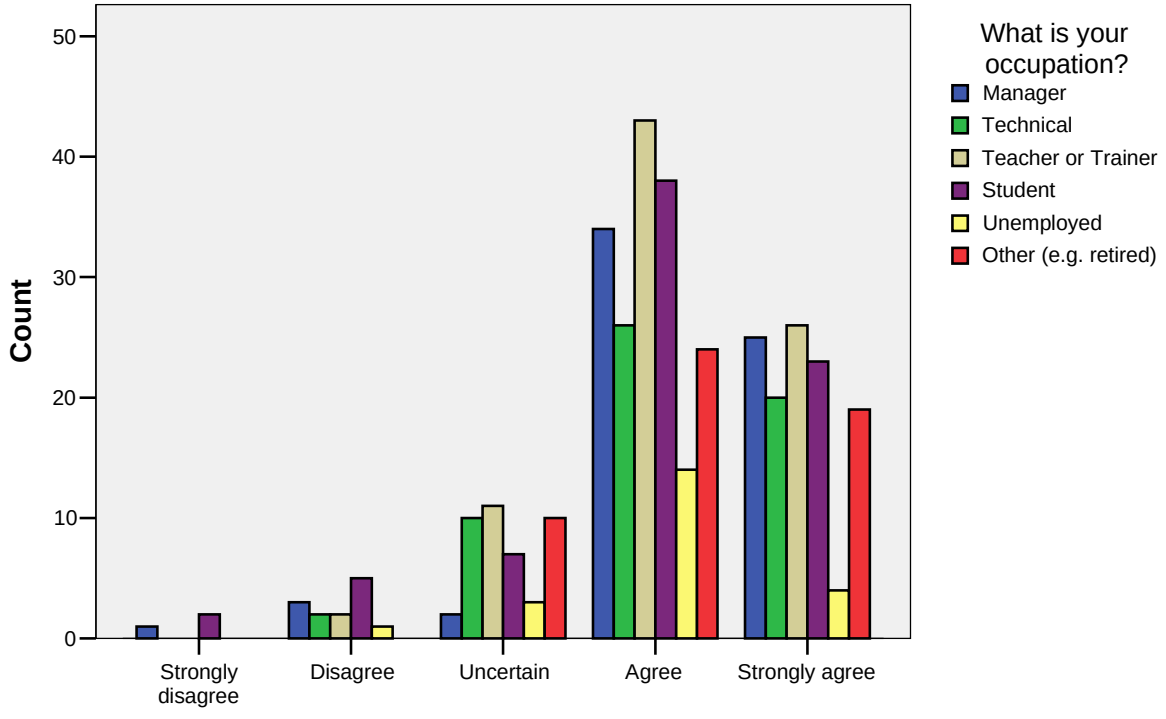
			What is Other (e.g. retired)	Total
From my personal study experience I find that the impact of technology on learning is valuable	Strongly disagree	Count	0	3
		Expected Count	,4	3,0
	Disagree	Count	0	13
		Expected Count	1,9	13,0
	Uncertain	Count	10	43
		Expected Count	6,4	43,0
	Agree	Count	24	179
		Expected Count	26,7	179,0
	Strongly agree	Count	19	117
		Expected Count	17,5	117,0
Total		Count	53	355
		Expected Count	53,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21,646[a]	20	,360
Likelihood Ratio	25,611	20	,179
Linear-by-Linear Association	,575	1	,448
N of Valid Cases	355		

a. 13 cells (43,3%) have expected count less than 5. The minimum expected count is ,19.

Bar Chart



From my personal study experience I find that the impact of technology on learning is valuable

Information and communications technology has usually been used to encourage us to be active participants in learning * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	Count	0	3	0
		Expected Count	,9	,8	1,2
	Disagree	Count	8	11	11
		Expected Count	8,8	7,8	11,1
	Uncertain	Count	28	23	18
		Expected Count	20,9	18,6	26,3
	Agree	Count	27	18	51
		Expected Count	28,9	25,8	36,5
	Strongly agree	Count	2	3	2
		Expected Count	5,5	4,9	6,9
Total		Count	65	58	82
		Expected Count	65,0	58,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	Count	1	1
		Expected Count	1,1	,3
	Disagree	Count	10	2
		Expected Count	10,1	3,0
	Uncertain	Count	25	3
		Expected Count	24,1	7,1
	Agree	Count	24	13
		Expected Count	33,4	9,8
	Strongly agree	Count	15	3
		Expected Count	6,3	1,9
Total		Count	75	22
		Expected Count	75,0	22,0

Crosstab

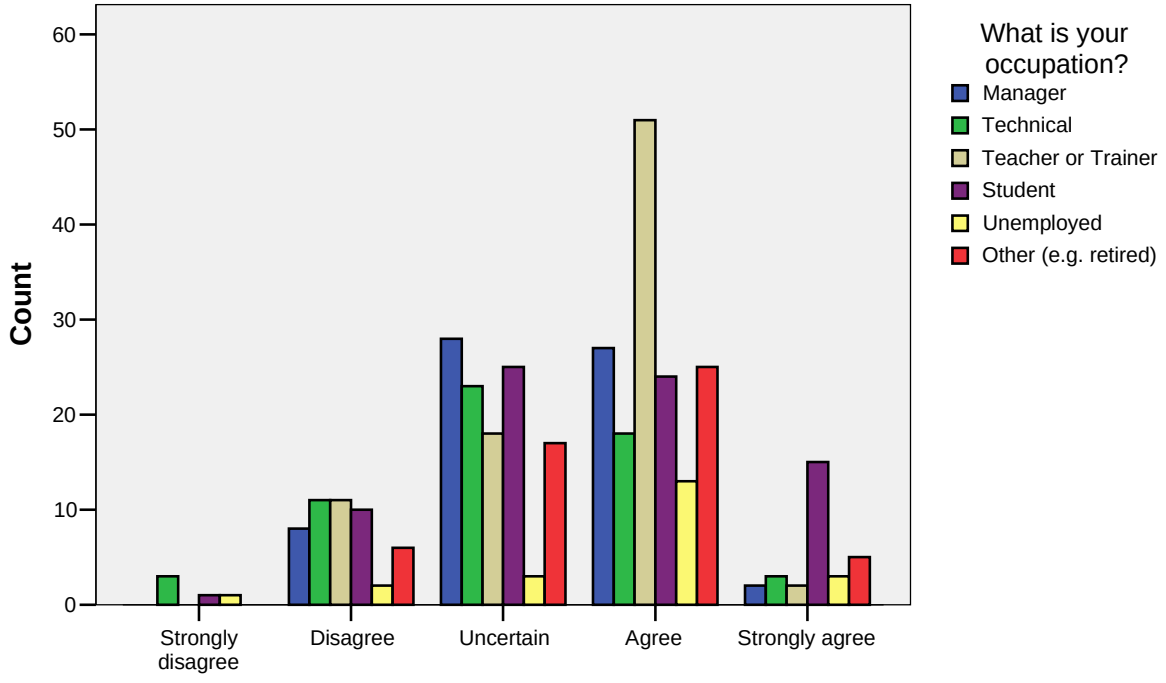
			What is Other (e.g. retired)	Total
Information and communications technology has usually been used to encourage us to be active participants in learning	Strongly disagree	Count	0	5
		Expected Count	,7	5,0
	Disagree	Count	6	48
		Expected Count	7,2	48,0
	Uncertain	Count	17	114
		Expected Count	17,0	114,0
	Agree	Count	25	158
		Expected Count	23,6	158,0
	Strongly agree	Count	5	30
		Expected Count	4,5	30,0
Total		Count	53	355
		Expected Count	53,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	51,611[a]	20	,000
Likelihood Ratio	50,673	20	,000
Linear-by-Linear Association	5,918	1	,015
N of Valid Cases	355		

a. 10 cells (33,3%) have expected count less than 5. The minimum expected count is ,31.

Bar Chart



Information and communications technology has usually been used to encourage us to be active participants in learning

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	Count	1	2	4
		Expected Count	2,0	1,8	2,5
	Disagree	Count	13	4	16
		Expected Count	8,6	7,7	10,8
	Uncertain	Count	25	28	16
		Expected Count	21,4	19,1	26,9
	Agree	Count	20	23	42
		Expected Count	28,7	25,6	36,2
	Strongly agree	Count	6	1	4
		Expected Count	4,4	3,9	5,5
Total		Count	65	58	82
		Expected Count	65,0	58,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	Count	3	1
		Expected Count	2,3	,7
	Disagree	Count	5	1
		Expected Count	9,9	3,0
	Uncertain	Count	20	8
		Expected Count	24,6	7,6
	Agree	Count	36	12
		Expected Count	33,1	10,1
	Strongly agree	Count	11	1
		Expected Count	5,1	1,6
Total		Count	75	23
		Expected Count	75,0	23,0

Crosstab

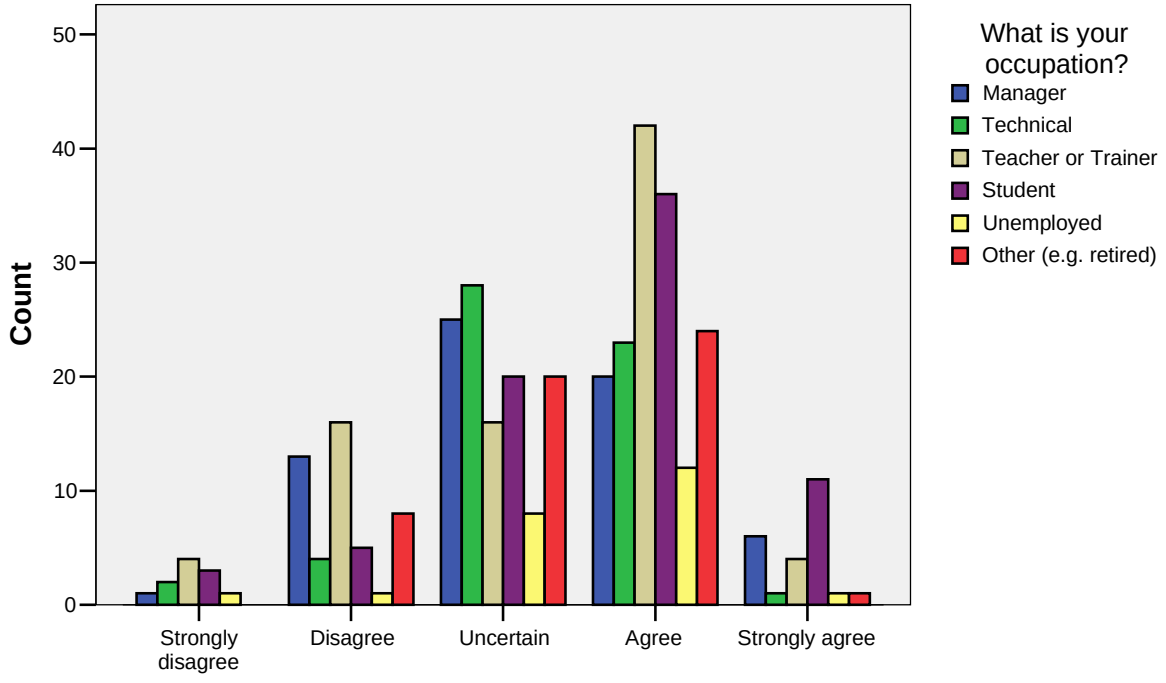
			What is Other (e.g. retired)	Total
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Strongly disagree	Count	0	11
		Expected Count	1,6	11,0
	Disagree	Count	8	47
		Expected Count	7,0	47,0
	Uncertain	Count	20	117
		Expected Count	17,4	117,0
	Agree	Count	24	157
		Expected Count	23,4	157,0
	Strongly agree	Count	1	24
		Expected Count	3,6	24,0
Total		Count	53	356
		Expected Count	53,0	356,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40,969[a]	20	,004
Likelihood Ratio	43,727	20	,002
Linear-by-Linear Association	1,760	1	,185
N of Valid Cases	356		

a. 11 cells (36,7%) have expected count less than 5. The minimum expected count is ,71.

Bar Chart



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	Count	2	1	1
		Expected Count	1,3	1,1	1,6
	Disagree	Count	9	9	12
		Expected Count	9,9	8,8	12,4
	Uncertain	Count	19	18	20
		Expected Count	17,1	15,2	21,3
	Agree	Count	29	25	37
		Expected Count	28,3	25,2	35,2
	Strongly agree	Count	6	5	11
		Expected Count	8,4	7,5	10,5
Total		Count	65	58	81
		Expected Count	65,0	58,0	81,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	Count	1	2
		Expected Count	1,5	,4
	Disagree	Count	14	2
		Expected Count	11,4	3,4
	Uncertain	Count	12	4
		Expected Count	19,7	5,8
	Agree	Count	31	10
		Expected Count	32,6	9,6
	Strongly agree	Count	17	4
		Expected Count	9,7	2,9
Total		Count	75	22
		Expected Count	75,0	22,0

Crosstab

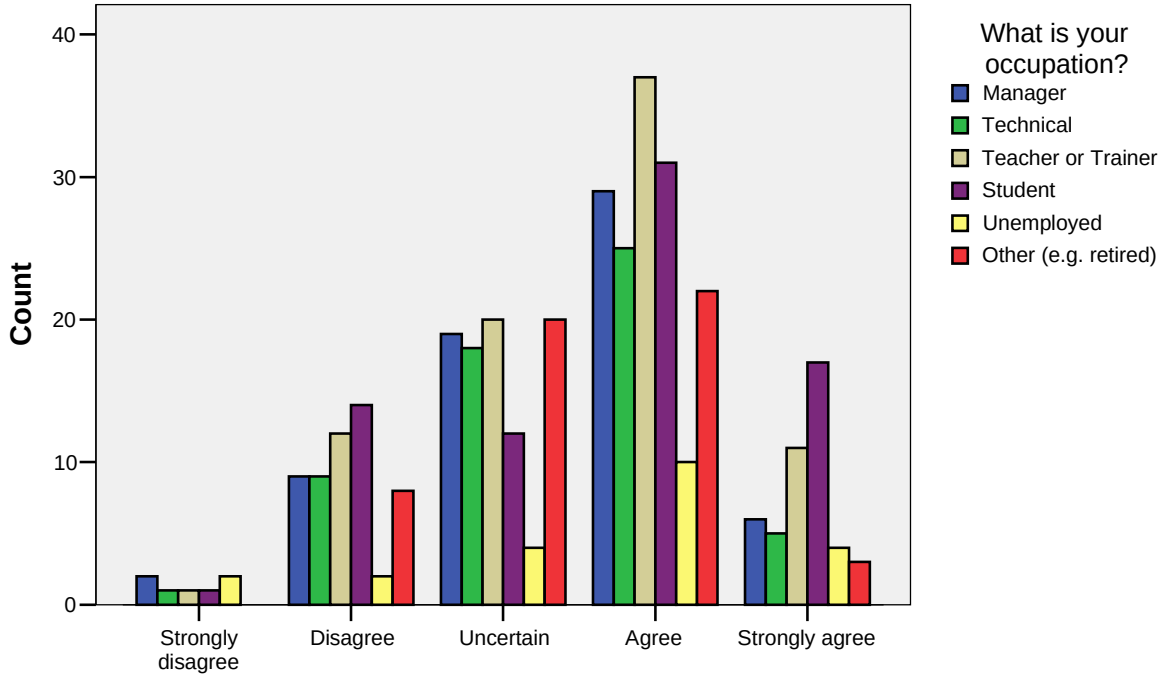
			What is Other (e.g. retired)	Total
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Strongly disagree	Count	0	7
		Expected Count	1,0	7,0
	Disagree	Count	8	54
		Expected Count	8,1	54,0
	Uncertain	Count	20	93
		Expected Count	13,9	93,0
	Agree	Count	22	154
		Expected Count	23,1	154,0
	Strongly agree	Count	3	46
		Expected Count	6,9	46,0
Total		Count	53	354
		Expected Count	53,0	354,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25,593[a]	20	,180
Likelihood Ratio	23,996	20	,243
Linear-by-Linear Association	,069	1	,793
N of Valid Cases	354		

a. 8 cells (26,7%) have expected count less than 5. The minimum expected count is ,44.

Bar Chart



Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Learning is enhanced when text and pictures are integrated in a multimedia environment * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	Count	0	0	0
		Expected Count	,4	,3	,5
	Disagree	Count	6	2	2
		Expected Count	3,0	2,6	3,7
	Uncertain	Count	3	10	11
		Expected Count	7,8	6,7	9,7
	Agree	Count	28	27	46
		Expected Count	32,5	28,1	40,4
	Strongly agree	Count	29	18	23
		Expected Count	22,3	19,3	27,7
Total		Count	66	57	82
		Expected Count	66,0	57,0	82,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	Count	1	1
		Expected Count	,4	,1
	Disagree	Count	3	2
		Expected Count	3,4	1,0
	Uncertain	Count	8	2
		Expected Count	8,9	2,6
	Agree	Count	36	10
		Expected Count	37,0	10,8
	Strongly agree	Count	27	7
		Expected Count	25,4	7,4
Total		Count	75	22
		Expected Count	75,0	22,0

Crosstab

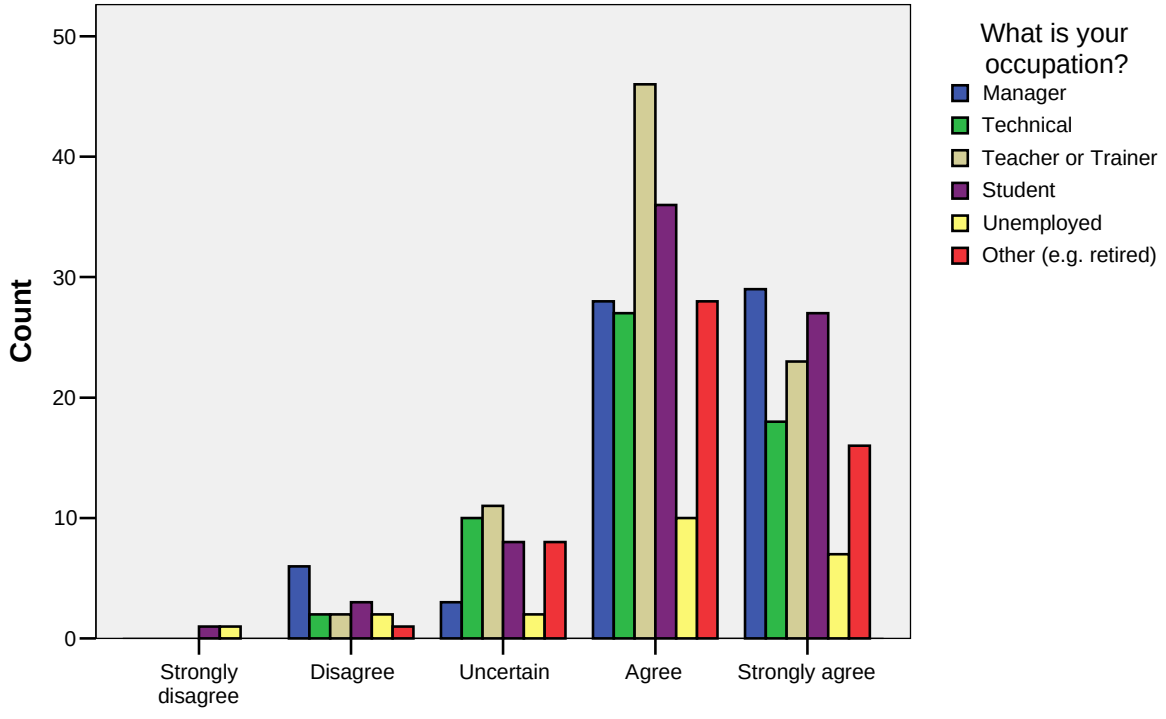
			What is Other (e.g. retired)	Total
Learning is enhanced when text and pictures are integrated in a multimedia environment	Strongly disagree	Count	0	2
		Expected Count	,3	2,0
	Disagree	Count	1	16
		Expected Count	2,4	16,0
	Uncertain	Count	8	42
		Expected Count	6,3	42,0
	Agree	Count	28	175
		Expected Count	26,1	175,0
	Strongly agree	Count	16	120
		Expected Count	17,9	120,0
Total		Count	53	355
		Expected Count	53,0	355,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,602[a]	20	,217
Likelihood Ratio	22,081	20	,336
Linear-by-Linear Association	,512	1	,474
N of Valid Cases	355		

a. 13 cells (43,3%) have expected count less than 5. The minimum expected count is ,12.

Bar Chart



Learning is enhanced when text and pictures are integrated in a multimedia environment

Educational games motivate learners and contribute to developing skills such as teamwork * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	Count	1	4	1
		Expected Count	1,7	1,5	2,0
	Disagree	Count	10	7	5
		Expected Count	6,7	5,9	8,1
	Uncertain	Count	15	18	6
		Expected Count	13,8	12,1	16,7
	Agree	Count	25	21	41
		Expected Count	28,2	24,7	34,1
	Strongly agree	Count	15	8	27
		Expected Count	15,7	13,8	19,0
Total		Count	66	58	80
		Expected Count	66,0	58,0	80,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	Count	3	0
		Expected Count	1,9	,6
	Disagree	Count	7	3
		Expected Count	7,6	2,2
	Uncertain	Count	15	6
		Expected Count	15,7	4,6
	Agree	Count	28	9
		Expected Count	32,0	9,4
	Strongly agree	Count	22	4
		Expected Count	17,8	5,2
Total		Count	75	22
		Expected Count	75,0	22,0

Crosstab

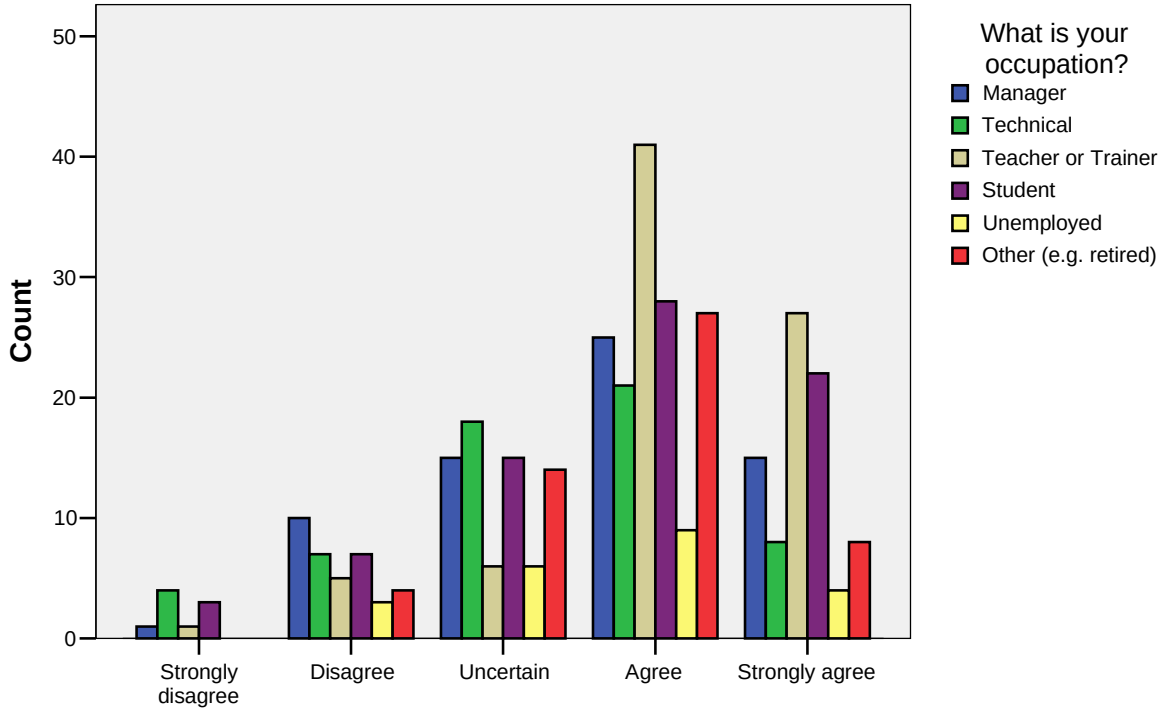
			What is Other (e.g. retired)	Total
Educational games motivate learners and contribute to developing skills such as teamwork	Strongly disagree	Count	0	9
		Expected Count	1,3	9,0
	Disagree	Count	4	36
		Expected Count	5,4	36,0
	Uncertain	Count	14	74
		Expected Count	11,1	74,0
	Agree	Count	27	151
		Expected Count	22,6	151,0
	Strongly agree	Count	8	84
		Expected Count	12,6	84,0
Total		Count	53	354
		Expected Count	53,0	354,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34,849[a]	20	,021
Likelihood Ratio	37,390	20	,011
Linear-by-Linear Association	,945	1	,331
N of Valid Cases	354		

a. 8 cells (26,7%) have expected count less than 5. The minimum expected count is ,56.

Bar Chart



Educational games motivate learners and contribute to developing skills such as teamwork

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	Count	0	0	1
		Expected Count	,4	,3	,5
	Disagree	Count	3	0	1
		Expected Count	2,1	1,9	2,6
	Uncertain	Count	11	6	6
		Expected Count	8,1	7,1	9,9
	Agree	Count	26	19	31
		Expected Count	24,3	21,3	29,5
	Strongly agree	Count	25	32	40
		Expected Count	30,1	26,4	36,6
Total		Count	65	57	79
		Expected Count	65,0	57,0	79,0

Crosstab

			What is your occupation?	
			Student	Unemployed
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	Count	1	0
		Expected Count	,4	,1
	Disagree	Count	7	0
		Expected Count	2,0	,6
	Uncertain	Count	13	1
		Expected Count	7,8	2,4
	Agree	Count	22	8
		Expected Count	23,1	7,1
	Strongly agree	Count	19	10
		Expected Count	28,7	8,8
Total		Count	62	19
		Expected Count	62,0	19,0

Crosstab

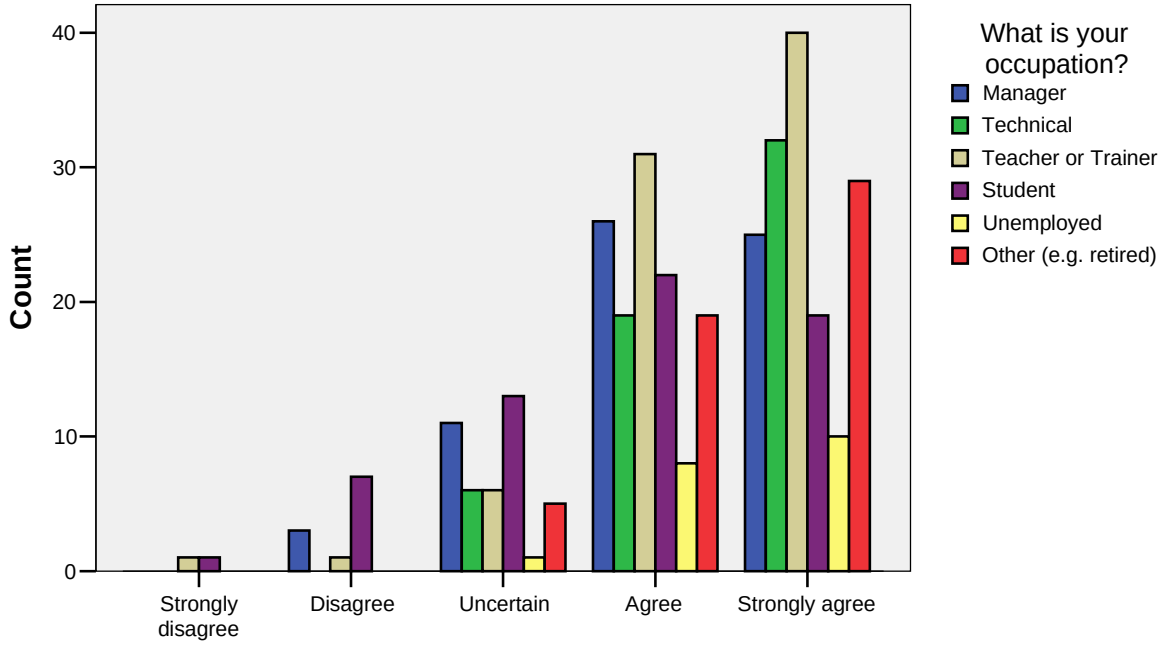
			What is	
			Other (e.g. retired)	Total
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Strongly disagree	Count	0	2
		Expected Count	,3	2,0
	Disagree	Count	0	11
		Expected Count	1,7	11,0
	Uncertain	Count	5	42
		Expected Count	6,6	42,0
	Agree	Count	19	125
		Expected Count	19,8	125,0
	Strongly agree	Count	29	155
		Expected Count	24,5	155,0
Total		Count	53	335
		Expected Count	53,0	335,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35,223[a]	20	,019
Likelihood Ratio	35,842	20	,016
Linear-by-Linear Association	,539	1	,463
N of Valid Cases	335		

a. 13 cells (43,3%) have expected count less than 5. The minimum expected count is ,11.

Bar Chart



The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Technology facilitates easier access to material for those studying part-time * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Technology facilitates easier access to material for those studying part-time	Strongly disagree	Count	1	1	2
		Expected Count	1,0	,8	1,2
	Disagree	Count	1	0	0
		Expected Count	1,0	,8	1,2
	Uncertain	Count	3	0	3
		Expected Count	4,1	3,6	4,9
	Agree	Count	22	16	22
		Expected Count	21,1	18,5	25,6
	Strongly agree	Count	38	40	52
		Expected Count	37,9	33,3	46,1
Total		Count	65	57	79
		Expected Count	65,0	57,0	79,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Technology facilitates easier access to material for those studying part-time	Strongly disagree	Count	0	1
		Expected Count	,9	,3
	Disagree	Count	4	0
		Expected Count	,9	,3
	Uncertain	Count	10	0
		Expected Count	3,9	1,3
	Agree	Count	17	10
		Expected Count	20,1	6,5
	Strongly agree	Count	31	9
		Expected Count	36,2	11,7
Total		Count	62	20
		Expected Count	62,0	20,0

Crosstab

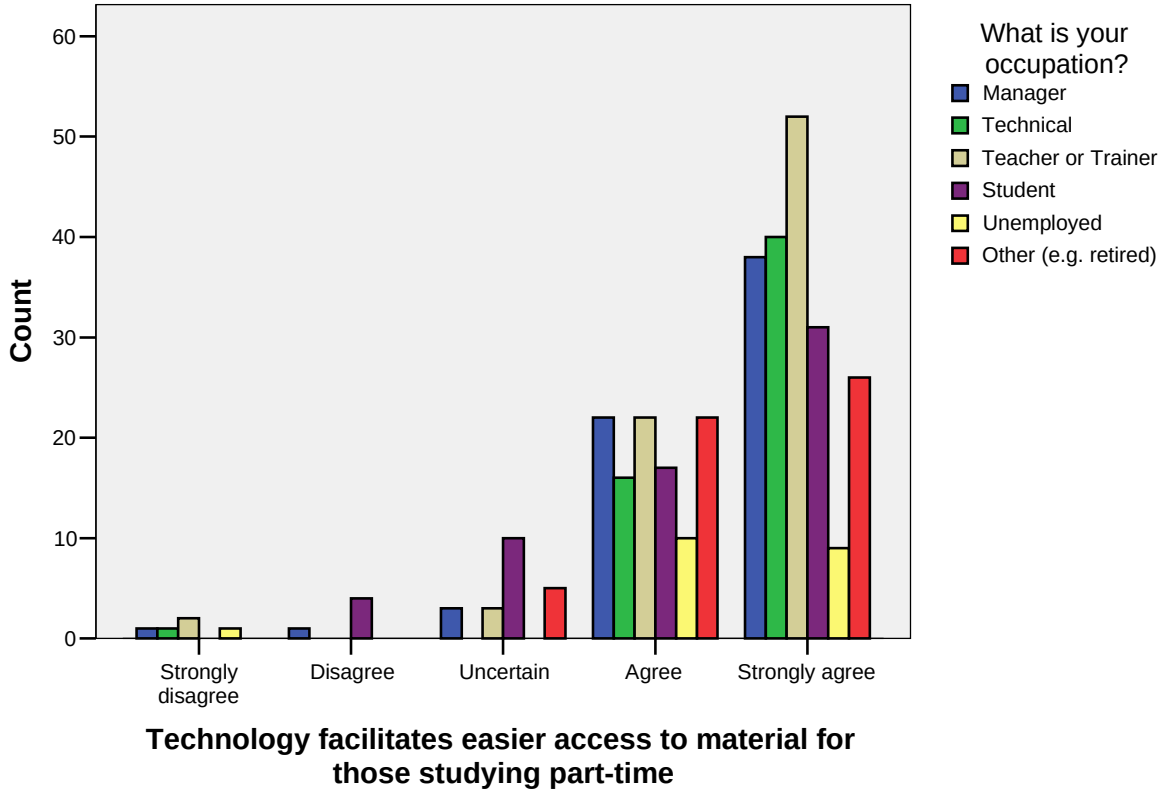
			What is Other (e.g. retired)	Total
Technology facilitates easier access to material for those studying part-time	Strongly disagree	Count	0	5
		Expected Count	,8	5,0
	Disagree	Count	0	5
		Expected Count	,8	5,0
	Uncertain	Count	5	21
		Expected Count	3,3	21,0
	Agree	Count	22	109
		Expected Count	17,2	109,0
	Strongly agree	Count	26	196
		Expected Count	30,9	196,0
Total		Count	53	336
		Expected Count	53,0	336,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42,618[a]	20	,002
Likelihood Ratio	43,598	20	,002
Linear-by-Linear Association	2,993	1	,084
N of Valid Cases	336		

a. 18 cells (60,0%) have expected count less than 5. The minimum expected count is ,30.

Bar Chart



Technology facilitates easier access to material for those studying part-time

University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	Count	4	5	3
		Expected Count	3,6	3,2	4,5
	Disagree	Count	6	3	17
		Expected Count	8,6	7,7	10,6
	Uncertain	Count	19	14	33
		Expected Count	18,5	16,5	22,9
	Agree	Count	19	17	12
		Expected Count	16,6	14,8	20,5
	Strongly agree	Count	16	18	14
		Expected Count	16,6	14,8	20,5
Total		Count	64	57	79
		Expected Count	64,0	57,0	79,0

Crosstab

			What is your occupation?	
			Student	Unemployed
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	Count	5	2
		Expected Count	3,5	1,1
	Disagree	Count	15	1
		Expected Count	8,3	2,7
	Uncertain	Count	19	1
		Expected Count	18,0	5,8
	Agree	Count	16	5
		Expected Count	16,1	5,2
	Strongly agree	Count	7	11
		Expected Count	16,1	5,2
Total		Count	62	20
		Expected Count	62,0	20,0

Crosstab

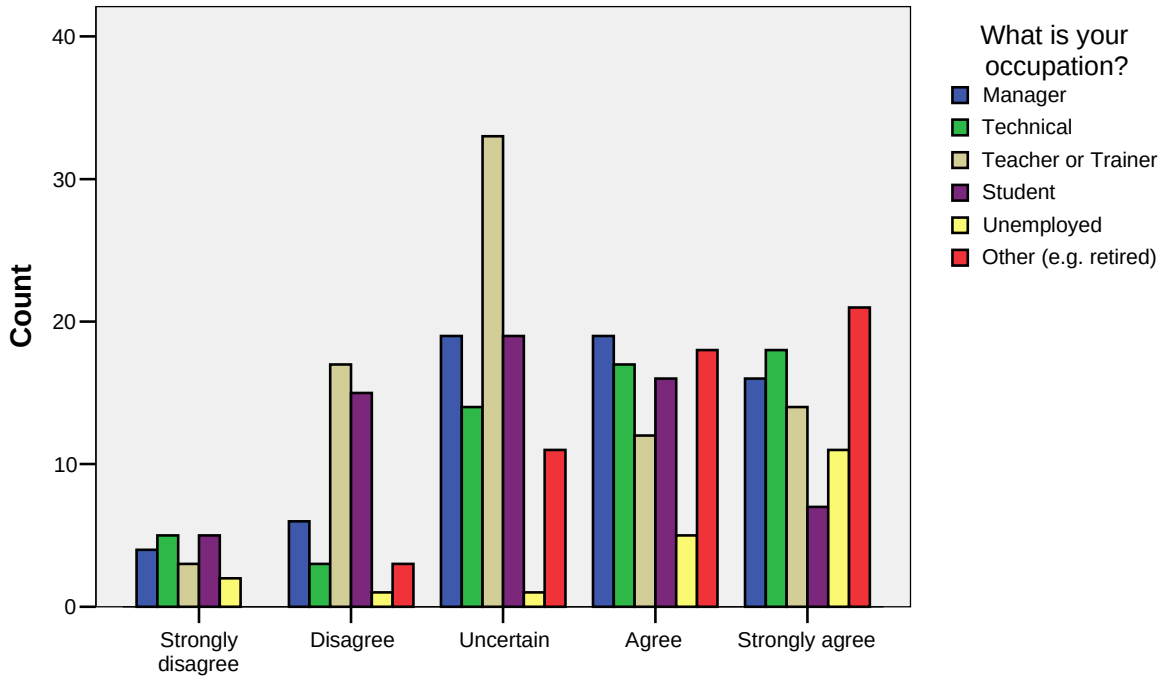
			What is Other (e.g. retired)	Total
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Strongly disagree	Count	0	19
		Expected Count	3,0	19,0
	Disagree	Count	3	45
		Expected Count	7,1	45,0
	Uncertain	Count	11	97
		Expected Count	15,3	97,0
	Agree	Count	18	87
		Expected Count	13,8	87,0
	Strongly agree	Count	21	87
		Expected Count	13,8	87,0
Total		Count	53	335
		Expected Count	53,0	335,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	55,899[a]	20	,000
Likelihood Ratio	60,642	20	,000
Linear-by-Linear Association	3,407	1	,065
N of Valid Cases	335		

a. 7 cells (23,3%) have expected count less than 5. The minimum expected count is 1,13.

Bar Chart



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	Count	4	5	6
		Expected Count	4,2	3,7	5,2
	Disagree	Count	15	10	20
		Expected Count	13,6	11,9	16,8
	Uncertain	Count	25	19	32
		Expected Count	24,0	21,0	29,6
	Agree	Count	12	14	16
		Expected Count	13,8	12,1	17,0
	Strongly agree	Count	8	8	5
		Expected Count	8,4	7,4	10,4
Total		Count	64	56	79
		Expected Count	64,0	56,0	79,0

Crosstab

			What is your occupation?	
			Student	Unemployed
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	Count	6	1
		Expected Count	4,1	1,3
	Disagree	Count	16	3
		Expected Count	13,2	4,3
	Uncertain	Count	22	5
		Expected Count	23,2	7,5
	Agree	Count	11	4
		Expected Count	13,4	4,3
	Strongly agree	Count	7	7
		Expected Count	8,2	2,6
Total		Count	62	20
		Expected Count	62,0	20,0

Crosstab

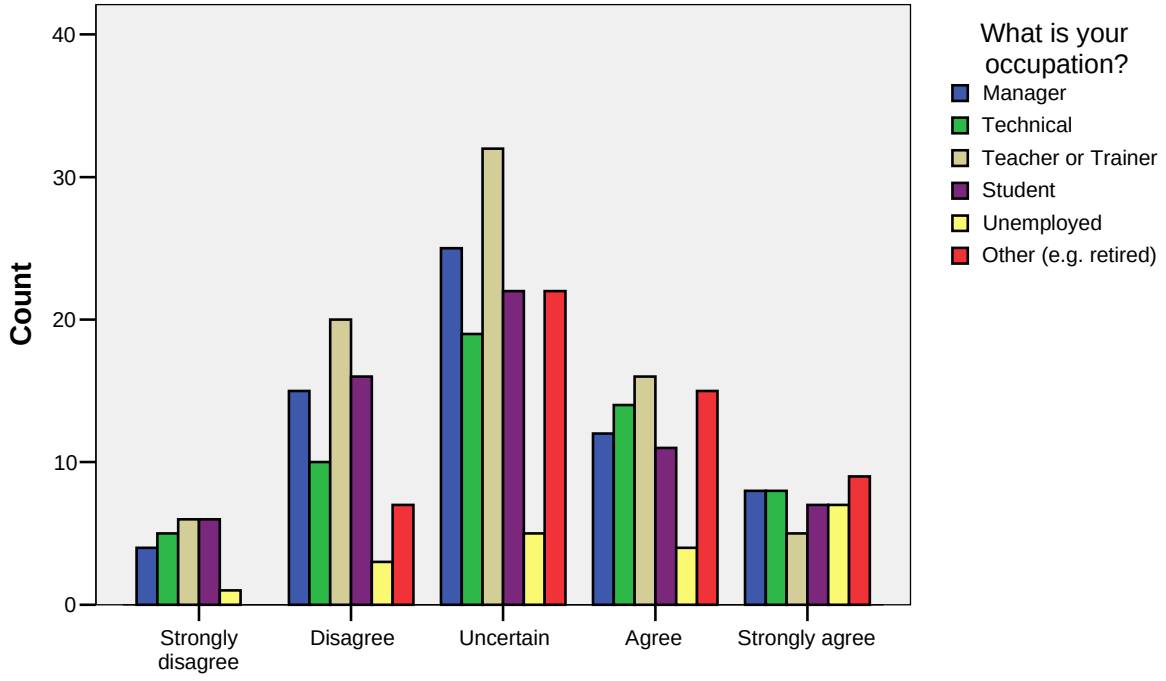
			What is Other (e.g. retired)	Total
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Strongly disagree	Count	0	22
		Expected Count	3,5	22,0
	Disagree	Count	7	71
		Expected Count	11,3	71,0
	Uncertain	Count	22	125
		Expected Count	19,8	125,0
	Agree	Count	15	72
		Expected Count	11,4	72,0
	Strongly agree	Count	9	44
		Expected Count	7,0	44,0
Total		Count	53	334
		Expected Count	53,0	334,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23,297[a]	20	,274
Likelihood Ratio	25,239	20	,192
Linear-by-Linear Association	4,536	1	,033
N of Valid Cases	334		

a. 8 cells (26,7%) have expected count less than 5. The minimum expected count is 1,32.

Bar Chart



There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Study at an Open University is especially of advantage to adults who have work and family obligations * What is your occupation?

Crosstab

			What is your occupation?		
			Manager	Technical	Teacher or Trainer
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	Count	1	0	0
		Expected Count	1,0	,8	1,2
	Disagree	Count	1	0	0
		Expected Count	1,0	,8	1,2
	Uncertain	Count	1	2	1
		Expected Count	1,9	1,7	2,4
	Agree	Count	12	5	16
		Expected Count	11,0	9,7	13,4
	Strongly agree	Count	50	50	62
		Expected Count	50,1	43,9	60,9
Total		Count	65	57	79
		Expected Count	65,0	57,0	79,0

Crosstab

			What is your occupation?	
			Student	Unemployed
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	Count	3	1
		Expected Count	,9	,3
	Disagree	Count	4	0
		Expected Count	,9	,3
	Uncertain	Count	6	0
		Expected Count	1,8	,6
	Agree	Count	17	1
		Expected Count	10,5	3,4
	Strongly agree	Count	32	18
		Expected Count	47,8	15,4
Total		Count	62	20
		Expected Count	62,0	20,0

Crosstab

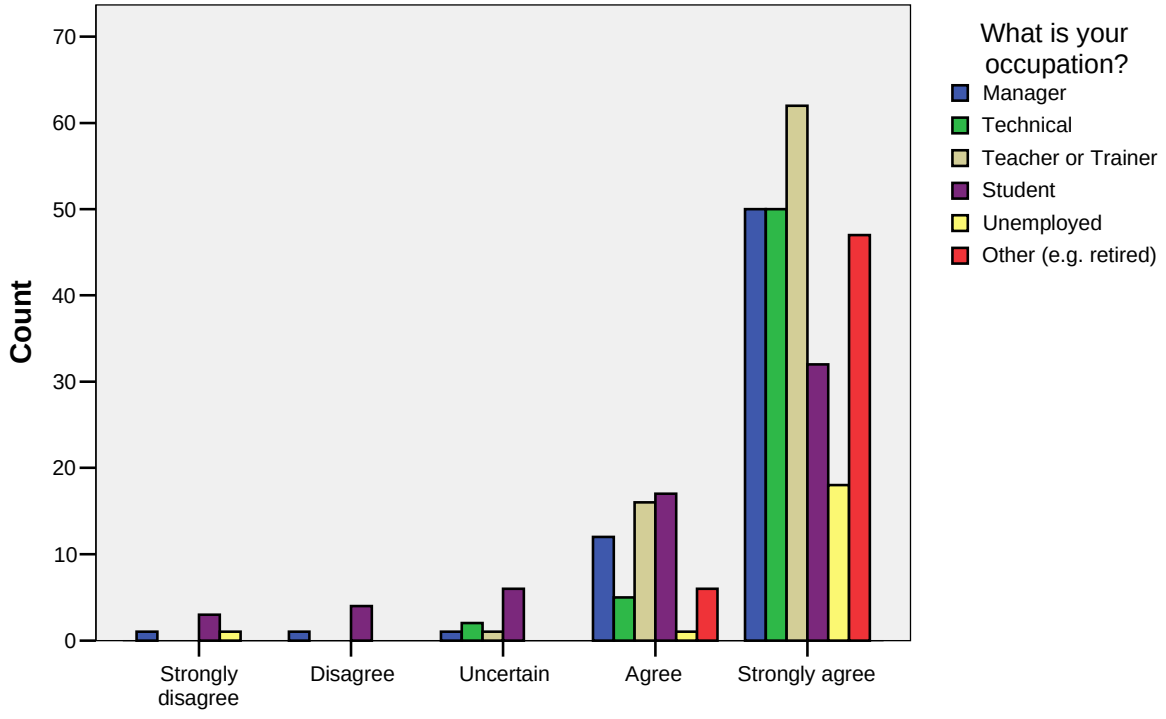
			What is	
			Other (e.g. retired)	Total
Study at an Open University is especially of advantage to adults who have work and family obligations	Strongly disagree	Count	0	5
		Expected Count	,8	5,0
	Disagree	Count	0	5
		Expected Count	,8	5,0
	Uncertain	Count	0	10
		Expected Count	1,6	10,0
	Agree	Count	6	57
		Expected Count	9,0	57,0
	Strongly agree	Count	47	259
		Expected Count	40,9	259,0
Total		Count	53	336
		Expected Count	53,0	336,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52,289[a]	20	,000
Likelihood Ratio	51,302	20	,000
Linear-by-Linear Association	,056	1	,813
N of Valid Cases	336		

a. 19 cells (63,3%) have expected count less than 5. The minimum expected count is ,30.

Bar Chart



Study at an Open University is especially of advantage to adults who have work and family obligations

B.9 Spearmans Korrelationen

Correlations

			What is your age grouping?	To what extent have you used advanced technological equipment in your professional life?
Spearman's rho	What is your age grouping?	Correlation Coefficient	1,000	-,081
		Sig. (2-tailed)	.	,126
		N	359	357
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	-,081	1,000
		Sig. (2-tailed)	,126	.
		N	357	357
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	-,221**	,170**
		Sig. (2-tailed)	,000	,001
		N	355	355
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,005	-,061
		Sig. (2-tailed)	,927	,253
		N	359	357
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	,093	-,014
		Sig. (2-tailed)	,080	,787
		N	356	354
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,074	-,036
		Sig. (2-tailed)	,161	,495
		N	357	355
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	,001	-,100
		Sig. (2-tailed)	,979	,059
		N	357	355
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,024	-,196**
		Sig. (2-tailed)	,654	,000
		N	357	356
	Information and communications technology has usually been used to encourage	Correlation Coefficient	-,073	,092
		Sig. (2-tailed)	,168	,085
		N	357	356
	Information and communications technology has been used to support the	Correlation Coefficient	-,215**	,120*
		Sig. (2-tailed)	,000	,023
		N	358	356
	Information and communications technology has been used to support more	Correlation Coefficient	-,105*	,010
		Sig. (2-tailed)	,048	,853
		N	355	353
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	-,115*	-,076
		Sig. (2-tailed)	,030	,155
		N	357	355
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	-,125*	-,011
		Sig. (2-tailed)	,019	,842
		N	356	355

Correlations

			What is your age grouping?	To what extent have you used advanced technological equipment in your professional life?
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,110*	-,085
		Sig. (2-tailed)	,045	,123
		N	336	334
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	,062	-,135*
		Sig. (2-tailed)	,258	,013
		N	337	335
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	,212**	-,116*
		Sig. (2-tailed)	,000	,034
		N	336	334
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	,180**	-,018
		Sig. (2-tailed)	,001	,744
		N	335	333
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,203**	-,109*
		Sig. (2-tailed)	,000	,046
		N	337	335

Correlations

			Have you had to change your way of working because of technological developments?	Thanks to technology, the problems of access to learning for students with disabilities have been resolved
Spearman's rho	What is your age grouping?	Correlation Coefficient	-,221**	,005
		Sig. (2-tailed)	,000	,927
		N	355	359
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	,170**	-,061
		Sig. (2-tailed)	,001	,253
		N	355	357
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	1,000	,078
		Sig. (2-tailed)	.	,143
		N	355	355
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,078	1,000
		Sig. (2-tailed)	,143	.
		N	355	359
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	-,045	,163**
		Sig. (2-tailed)	,395	,002
		N	352	356
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,022	,128*
		Sig. (2-tailed)	,675	,016
		N	353	357
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	-,013	,090
		Sig. (2-tailed)	,803	,090
		N	353	357
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	-,092	,183**
		Sig. (2-tailed)	,086	,001
		N	354	357
	Information and communications technology has usually been used to encourage	Correlation Coefficient	-,017	,194**
		Sig. (2-tailed)	,752	,000
		N	354	357
	Information and communications technology has been used to support the	Correlation Coefficient	-,066	,202**
		Sig. (2-tailed)	,216	,000
		N	354	358
	Information and communications technology has been used to support more	Correlation Coefficient	-,072	,160**
		Sig. (2-tailed)	,179	,002
		N	351	355
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	-,048	,085
		Sig. (2-tailed)	,373	,108
		N	353	357
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	,055	,053
		Sig. (2-tailed)	,306	,314
		N	353	356

Correlations

			Have you had to change your way of working because of technological developments?	Thanks to technology, the problems of access to learning for students with disabilities have been resolved
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	-,080	,270**
		Sig. (2-tailed)	,146	,000
		N	332	336
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	-,121*	,144**
		Sig. (2-tailed)	,027	,008
		N	333	337
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	,019	,144**
		Sig. (2-tailed)	,736	,008
		N	332	336
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	,029	,150**
		Sig. (2-tailed)	,602	,006
		N	331	335
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	-,105	,128*
		Sig. (2-tailed)	,056	,019
		N	333	337

Correlations

			Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Online communication allows increased amounts of communication between teachers and students when compared with other forms of education
Spearman's rho	What is your age grouping?	Correlation Coefficient	,093	,074
		Sig. (2-tailed)	,080	,161
		N	356	357
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	-,014	-,036
		Sig. (2-tailed)	,787	,495
		N	354	355
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	-,045	,022
		Sig. (2-tailed)	,395	,675
		N	352	353
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,163**	,128*
		Sig. (2-tailed)	,002	,016
		N	356	357
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	1,000	,454**
		Sig. (2-tailed)	.	,000
		N	356	354
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,454**	1,000
		Sig. (2-tailed)	,000	.
		N	354	357
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	,133*	,160**
		Sig. (2-tailed)	,012	,003
		N	354	356
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,192**	,211**
		Sig. (2-tailed)	,000	,000
		N	354	355
	Information and communications technology has usually been used to encourage	Correlation Coefficient	,211**	,161**
		Sig. (2-tailed)	,000	,002
		N	354	356
	Information and communications technology has been used to support the	Correlation Coefficient	,163**	,073
		Sig. (2-tailed)	,002	,169
		N	356	356
	Information and communications technology has been used to support more	Correlation Coefficient	,153**	-,029
		Sig. (2-tailed)	,004	,583
		N	354	353
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	,028	,030
		Sig. (2-tailed)	,593	,577
		N	355	355
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	,018	,061
		Sig. (2-tailed)	,733	,254
		N	353	354

Correlations

			Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Online communication allows increased amounts of communication between teachers and students when compared with other forms of education
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,162**	,141**
		Sig. (2-tailed)	,003	,010
		N	335	334
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	,068	,133*
		Sig. (2-tailed)	,216	,015
		N	335	335
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	,314**	,191**
		Sig. (2-tailed)	,000	,000
		N	334	335
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	,299**	,232**
		Sig. (2-tailed)	,000	,000
		N	333	334
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,095	,123*
		Sig. (2-tailed)	,084	,025
		N	335	335

Correlations

			Only optimistic people think that the impact of technology on learning is beneficial	From my personal study experience I find that the impact of technology on learning is valuable
Spearman's rho	What is your age grouping?	Correlation Coefficient	,001	,024
		Sig. (2-tailed)	,979	,654
		N	357	357
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	-,100	-,196**
		Sig. (2-tailed)	,059	,000
		N	355	356
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	-,013	-,092
		Sig. (2-tailed)	,803	,086
		N	353	354
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,090	,183**
		Sig. (2-tailed)	,090	,001
		N	357	357
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	,133*	,192**
		Sig. (2-tailed)	,012	,000
		N	354	354
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,160**	,211**
		Sig. (2-tailed)	,003	,000
		N	356	355
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	1,000	,222**
		Sig. (2-tailed)	.	,000
		N	357	355
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,222**	1,000
		Sig. (2-tailed)	,000	.
		N	355	357
	Information and communications technology has usually been used to encourage	Correlation Coefficient	,090	,272**
		Sig. (2-tailed)	,089	,000
		N	356	356
	Information and communications technology has been used to support the	Correlation Coefficient	,075	,213**
		Sig. (2-tailed)	,161	,000
		N	356	356
	Information and communications technology has been used to support more	Correlation Coefficient	-,012	,139**
		Sig. (2-tailed)	,819	,009
		N	353	353
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	,061	,327**
		Sig. (2-tailed)	,250	,000
		N	355	355
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	-,035	,220**
		Sig. (2-tailed)	,511	,000
		N	354	355

Correlations

			Only optimistic people think that the impact of technology on learning is beneficial	From my personal study experience I find that the impact of technology on learning is valuable
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,074	,258**
		Sig. (2-tailed)	,176	,000
		N	335	334
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	,150**	,283**
		Sig. (2-tailed)	,006	,000
		N	336	335
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	,108*	,139*
		Sig. (2-tailed)	,048	,011
		N	336	334
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	,001	,085
		Sig. (2-tailed)	,992	,121
		N	335	333
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,051	,261**
		Sig. (2-tailed)	,356	,000
		N	336	335

Correlations

			Information and communications technology has usually been used to encourage us to be active participants in learning	Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving
Spearman's rho	What is your age grouping?	Correlation Coefficient	-,073	-,215**
		Sig. (2-tailed)	,168	,000
		N	357	358
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	,092	,120*
		Sig. (2-tailed)	,085	,023
		N	356	356
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	-,017	-,066
		Sig. (2-tailed)	,752	,216
		N	354	354
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,194**	,202**
		Sig. (2-tailed)	,000	,000
		N	357	358
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	,211**	,163**
		Sig. (2-tailed)	,000	,002
		N	354	356
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,161**	,073
		Sig. (2-tailed)	,002	,169
		N	356	356
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	,090	,075
		Sig. (2-tailed)	,089	,161
		N	356	356
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,272**	,213**
		Sig. (2-tailed)	,000	,000
		N	356	356
	Information and communications technology has usually been used to encourage	Correlation Coefficient	1,000	,396**
		Sig. (2-tailed)	.	,000
		N	357	356
	Information and communications technology has been used to support the	Correlation Coefficient	,396**	1,000
		Sig. (2-tailed)	,000	.
		N	356	358
	Information and communications technology has been used to support more	Correlation Coefficient	,176**	,244**
		Sig. (2-tailed)	,001	,000
		N	353	355
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	,173**	,263**
		Sig. (2-tailed)	,001	,000
		N	355	356
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	,187**	,201**
		Sig. (2-tailed)	,000	,000
		N	355	355

Correlations

			Information and communications technology has usually been used to encourage us to be active participants in learning	Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,161**	,145**
		Sig. (2-tailed)	,003	,008
		N	334	336
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	,116*	,096
		Sig. (2-tailed)	,034	,078
		N	335	337
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	,094	,028
		Sig. (2-tailed)	,084	,611
		N	335	336
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	,155**	-,009
		Sig. (2-tailed)	,004	,863
		N	334	335
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,032	-,011
		Sig. (2-tailed)	,562	,834
		N	335	337

Correlations

			Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Learning is enhanced when text and pictures are integrated in a multimedia environment
Spearman's rho	What is your age grouping?	Correlation Coefficient	-,105*	-,115*
		Sig. (2-tailed)	,048	,030
		N	355	357
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	,010	-,076
		Sig. (2-tailed)	,853	,155
		N	353	355
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	-,072	-,048
		Sig. (2-tailed)	,179	,373
		N	351	353
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,160**	,085
		Sig. (2-tailed)	,002	,108
		N	355	357
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	,153**	,028
		Sig. (2-tailed)	,004	,593
		N	354	355
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	-,029	,030
		Sig. (2-tailed)	,583	,577
		N	353	355
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	-,012	,061
		Sig. (2-tailed)	,819	,250
		N	353	355
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,139**	,327**
		Sig. (2-tailed)	,009	,000
		N	353	355
	Information and communications technology has usually been used to encourage	Correlation Coefficient	,176**	,173**
		Sig. (2-tailed)	,001	,001
		N	353	355
	Information and communications technology has been used to support the	Correlation Coefficient	,244**	,263**
		Sig. (2-tailed)	,000	,000
		N	355	356
	Information and communications technology has been used to support more	Correlation Coefficient	1,000	,206**
		Sig. (2-tailed)	.	,000
		N	355	354
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	,206**	1,000
		Sig. (2-tailed)	,000	.
		N	354	357
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	,181**	,317**
		Sig. (2-tailed)	,001	,000
		N	353	354

Correlations

			Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Learning is enhanced when text and pictures are integrated in a multimedia environment
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,261**	,101
		Sig. (2-tailed)	,000	,066
		N	335	335
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	,206**	,161**
		Sig. (2-tailed)	,000	,003
		N	335	335
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	-,092	,063
		Sig. (2-tailed)	,094	,248
		N	334	334
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	-,046	-,033
		Sig. (2-tailed)	,402	,544
		N	333	333
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,038	,192**
		Sig. (2-tailed)	,488	,000
		N	335	335

Correlations

			Educational games motivate learners and contribute to developing skills such as teamwork	The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education
Spearman's rho	What is your age grouping?	Correlation Coefficient	-,125*	,110*
		Sig. (2-tailed)	,019	,045
		N	356	336
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	-,011	-,085
		Sig. (2-tailed)	,842	,123
		N	355	334
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	,055	-,080
		Sig. (2-tailed)	,306	,146
		N	353	332
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,053	,270**
		Sig. (2-tailed)	,314	,000
		N	356	336
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	,018	,162**
		Sig. (2-tailed)	,733	,003
		N	353	335
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,061	,141**
		Sig. (2-tailed)	,254	,010
		N	354	334
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	-,035	,074
		Sig. (2-tailed)	,511	,176
		N	354	335
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,220**	,258**
		Sig. (2-tailed)	,000	,000
		N	355	334
	Information and communications technology has usually been used to encourage	Correlation Coefficient	,187**	,161**
		Sig. (2-tailed)	,000	,003
		N	355	334
	Information and communications technology has been used to support the	Correlation Coefficient	,201**	,145**
		Sig. (2-tailed)	,000	,008
		N	355	336
	Information and communications technology has been used to support more	Correlation Coefficient	,181**	,261**
		Sig. (2-tailed)	,001	,000
		N	353	335
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	,317**	,101
		Sig. (2-tailed)	,000	,066
		N	354	335
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	1,000	,139*
		Sig. (2-tailed)	.	,011
		N	356	333

Correlations

			Educational games motivate learners and contribute to developing skills such as teamwork	The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,139*	1,000
		Sig. (2-tailed)	,011	.
		N	333	336
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	,271**	,443**
		Sig. (2-tailed)	,000	,000
		N	334	336
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	-,120*	,233**
		Sig. (2-tailed)	,029	,000
		N	333	335
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	-,041	,149**
		Sig. (2-tailed)	,452	,006
		N	332	334
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,061	,358**
		Sig. (2-tailed)	,269	,000
		N	334	336

Correlations

			Technology facilitates easier access to material for those studying part-time	University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities
Spearman's rho	What is your age grouping?	Correlation Coefficient	,062	,212**
		Sig. (2-tailed)	,258	,000
		N	337	336
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	-,135*	-,116*
		Sig. (2-tailed)	,013	,034
		N	335	334
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	-,121*	,019
		Sig. (2-tailed)	,027	,736
		N	333	332
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,144**	,144**
		Sig. (2-tailed)	,008	,008
		N	337	336
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	,068	,314**
		Sig. (2-tailed)	,216	,000
		N	335	334
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,133*	,191**
		Sig. (2-tailed)	,015	,000
		N	335	335
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	,150**	,108*
		Sig. (2-tailed)	,006	,048
		N	336	336
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,283**	,139*
		Sig. (2-tailed)	,000	,011
		N	335	334
	Information and communications technology has usually been used to encourage	Correlation Coefficient	,116*	,094
		Sig. (2-tailed)	,034	,084
		N	335	335
	Information and communications technology has been used to support the	Correlation Coefficient	,096	,028
		Sig. (2-tailed)	,078	,611
		N	337	336
	Information and communications technology has been used to support more	Correlation Coefficient	,206**	-,092
		Sig. (2-tailed)	,000	,094
		N	335	334
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	,161**	,063
		Sig. (2-tailed)	,003	,248
		N	335	334
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	,271**	-,120*
		Sig. (2-tailed)	,000	,029
		N	334	333

Correlations

			Technology facilitates easier access to material for those studying part-time	University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,443**	,233**
		Sig. (2-tailed)	,000	,000
		N	336	335
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	1,000	,071
		Sig. (2-tailed)	.	,192
		N	337	336
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	,071	1,000
		Sig. (2-tailed)	,192	.
		N	336	336
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	-,004	,614**
		Sig. (2-tailed)	,948	,000
		N	335	335
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,336**	,328**
		Sig. (2-tailed)	,000	,000
		N	337	336

Correlations

			There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Study at an Open University is especially of advantage to adults who have work and family obligations
Spearman's rho	What is your age grouping?	Correlation Coefficient	,180**	,203**
		Sig. (2-tailed)	,001	,000
		N	335	337
	To what extent have you used advanced technological equipment in your professional life?	Correlation Coefficient	-,018	-,109*
		Sig. (2-tailed)	,744	,046
		N	333	335
	Have you had to change your way of working because of technological developments?	Correlation Coefficient	,029	-,105
		Sig. (2-tailed)	,602	,056
		N	331	333
	Thanks to technology, the problems of access to learning for students with disabilities have been	Correlation Coefficient	,150**	,128*
		Sig. (2-tailed)	,006	,019
		N	335	337
	Contacts between students and teachers can have the same intensity in online education as in	Correlation Coefficient	,299**	,095
		Sig. (2-tailed)	,000	,084
		N	333	335
	Online communication allows increased amounts of communication between teachers and students	Correlation Coefficient	,232**	,123*
		Sig. (2-tailed)	,000	,025
		N	334	335
	Only optimistic people think that the impact of technology on learning is beneficial	Correlation Coefficient	,001	,051
		Sig. (2-tailed)	,992	,356
		N	335	336
	From my personal study experience I find that the impact of technology on learning is valuable	Correlation Coefficient	,085	,261**
		Sig. (2-tailed)	,121	,000
		N	333	335
	Information and communications technology has usually been used to encourage	Correlation Coefficient	,155**	,032
		Sig. (2-tailed)	,004	,562
		N	334	335
	Information and communications technology has been used to support the	Correlation Coefficient	-,009	-,011
		Sig. (2-tailed)	,863	,834
		N	335	337
	Information and communications technology has been used to support more	Correlation Coefficient	-,046	,038
		Sig. (2-tailed)	,402	,488
		N	333	335
	Learning is enhanced when text and pictures are integrated in a multimedia environment	Correlation Coefficient	-,033	,192**
		Sig. (2-tailed)	,544	,000
		N	333	335
	Educational games motivate learners and contribute to developing skills such as teamwork	Correlation Coefficient	-,041	,061
		Sig. (2-tailed)	,452	,269
		N	332	334

Correlations

			There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Study at an Open University is especially of advantage to adults who have work and family obligations
Spearman's rho	The application of new ICT concepts to support learning and teaching and provide Internet access to	Correlation Coefficient	,149**	,358**
		Sig. (2-tailed)	,006	,000
		N	334	336
	Technology facilitates easier access to material for those studying part-time	Correlation Coefficient	-,004	,336**
		Sig. (2-tailed)	,948	,000
		N	335	337
	University degrees awarded by open universities may be comparable to degrees	Correlation Coefficient	,614**	,328**
		Sig. (2-tailed)	,000	,000
		N	335	336
	There is no difference in learning outcomes between studying at an Open University or at a	Correlation Coefficient	1,000	,264**
		Sig. (2-tailed)	.	,000
		N	335	335
	Study at an Open University is especially of advantage to adults who have work and family	Correlation Coefficient	,264**	1,000
		Sig. (2-tailed)	,000	.
		N	335	337

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

B.10 Häufigkeiten

Statistics

		What is your occupation?	What is your age grouping?	Gender	What is your level of education?	To what extent have you used advanced technological equipment in your professional life?	Have you had to change your way of working because of technological developments?
N	Valid	357	359	357	356	357	355
	Missing	2	0	2	3	2	4

Statistics

		Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Only optimistic people think that the impact of technology on learning is beneficial	From my personal study experience I find that the impact of technology on learning is valuable
N	Valid	359	356	357	357	357
	Missing	0	3	2	2	2

Statistics

		Information and communications technology has usually been used to encourage us to be active participants in learning	Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Learning is enhanced when text and pictures are integrated in a multimedia environment	Educational games motivate learners and contribute to developing skills such as teamwork
N	Valid	357	358	355	357	356
	Missing	2	1	4	2	3

Statistics

		The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Technology facilitates easier access to material for those studying part-time	University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university
N	Valid	336	337	336	335
	Missing	23	22	23	24

Statistics

		Study at an Open University is especially of advantage to adults who have work and family obligations	Main group/Control group
N	Valid	337	359
	Missing	22	0

Frequency Table

What is your occupation?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manager	66	18,4	18,5	18,5
	Technical	58	16,2	16,2	34,7
	Teacher or Trainer	82	22,8	23,0	57,7
	Student	75	20,9	21,0	78,7
	Unemployed	23	6,4	6,4	85,2
	Other (e.g. retired)	53	14,8	14,8	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

What is your age grouping?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24 or younger	60	16,7	16,7	16,7
	25-29	90	25,1	25,1	41,8
	30-40	120	33,4	33,4	75,2
	41-50	64	17,8	17,8	93,0
	over 50	25	7,0	7,0	100,0
	Total	359	100,0	100,0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	160	44,6	44,8	44,8
	Female	197	54,9	55,2	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

What is your level of education?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school matriculation	179	49,9	50,3	50,3
	One to three years of post-secondary education	67	18,7	18,8	69,1
	Four or more years of post-secondary education	110	30,6	30,9	100,0
	Total	356	99,2	100,0	
Missing	0	3	,8		
Total		359	100,0		

To what extent have you used advanced technological equipment in your professional life?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	144	40,1	40,3	40,3
	Quite a bit	157	43,7	44,0	84,3
	Little	36	10,0	10,1	94,4
	very little	12	3,3	3,4	97,8
	not at all	8	2,2	2,2	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

Have you had to change your way of working because of technological developments?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, more than once	231	64,3	65,1	65,1
	Yes. Once	29	8,1	8,2	73,2
	No	95	26,5	26,8	100,0
	Total	355	98,9	100,0	
Missing	0	4	1,1		
Total		359	100,0		

Thanks to technology, the problems of access to learning for students with disabilities have been resolved

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	1,9	1,9	1,9
	Disagree	42	11,7	11,7	13,6
	Uncertain	116	32,3	32,3	46,0
	Agree	164	45,7	45,7	91,6
	Strongly agree	30	8,4	8,4	100,0
	Total	359	100,0	100,0	

Contacts between students and teachers can have the same intensity in online education as in face-to-face education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	48	13,4	13,5	13,5
	Disagree	156	43,5	43,8	57,3
	Uncertain	57	15,9	16,0	73,3
	Agree	76	21,2	21,3	94,7
	Strongly agree	19	5,3	5,3	100,0
	Total	356	99,2	100,0	
Missing	0	3	,8		
Total		359	100,0		

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	17	4,7	4,8	4,8
	Disagree	89	24,8	24,9	29,7
	Uncertain	78	21,7	21,8	51,5
	Agree	132	36,8	37,0	88,5
	Strongly agree	41	11,4	11,5	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

Only optimistic people think that the impact of technology on learning is beneficial

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	10	2,8	2,8	2,8
	Agree	52	14,5	14,6	17,4
	Uncertain	74	20,6	20,7	38,1
	Disagree	169	47,1	47,3	85,4
	Strongly disagree	52	14,5	14,6	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

From my personal study experience I find that the impact of technology on learning is valuable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	,8	,8	,8
	Disagree	13	3,6	3,6	4,5
	Uncertain	43	12,0	12,0	16,5
	Agree	180	50,1	50,4	66,9
	Strongly agree	118	32,9	33,1	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

Information and communications technology has usually been used to encourage us to be active participants in learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	1,4	1,4	1,4
	Disagree	48	13,4	13,4	14,8
	Uncertain	114	31,8	31,9	46,8
	Agree	159	44,3	44,5	91,3
	Strongly agree	31	8,6	8,7	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	11	3,1	3,1	3,1
	Disagree	47	13,1	13,1	16,2
	Uncertain	117	32,6	32,7	48,9
	Agree	159	44,3	44,4	93,3
	Strongly agree	24	6,7	6,7	100,0
	Total	358	99,7	100,0	
Missing	0	1	,3		
Total		359	100,0		

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	1,9	2,0	2,0
	Disagree	54	15,0	15,2	17,2
	Uncertain	93	25,9	26,2	43,4
	Agree	155	43,2	43,7	87,0
	Strongly agree	46	12,8	13,0	100,0
	Total	355	98,9	100,0	
Missing	0	4	1,1		
Total		359	100,0		

Learning is enhanced when text and pictures are integrated in a multimedia environment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	,6	,6	,6
	Disagree	16	4,5	4,5	5,0
	Uncertain	42	11,7	11,8	16,8
	Agree	176	49,0	49,3	66,1
	Strongly agree	121	33,7	33,9	100,0
	Total	357	99,4	100,0	
Missing	0	2	,6		
Total		359	100,0		

Educational games motivate learners and contribute to developing skills such as teamwork

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	2,5	2,5	2,5
	Disagree	36	10,0	10,1	12,6
	Uncertain	74	20,6	20,8	33,4
	Agree	152	42,3	42,7	76,1
	Strongly agree	85	23,7	23,9	100,0
	Total	356	99,2	100,0	
Missing	0	3	,8		
Total		359	100,0		

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	,6	,6	,6
	Disagree	11	3,1	3,3	3,9
	Uncertain	42	11,7	12,5	16,4
	Agree	125	34,8	37,2	53,6
	Strongly agree	156	43,5	46,4	100,0
	Total	336	93,6	100,0	
Missing	0	23	6,4		
Total		359	100,0		

Technology facilitates easier access to material for those studying part-time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	1,4	1,5	1,5
	Disagree	5	1,4	1,5	3,0
	Uncertain	21	5,8	6,2	9,2
	Agree	109	30,4	32,3	41,5
	Strongly agree	197	54,9	58,5	100,0
	Total	337	93,9	100,0	
Missing	0	22	6,1		
Total		359	100,0		

University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	19	5,3	5,7	5,7
	Disagree	45	12,5	13,4	19,0
	Uncertain	97	27,0	28,9	47,9
	Agree	87	24,2	25,9	73,8
	Strongly agree	88	24,5	26,2	100,0
	Total	336	93,6	100,0	
Missing	0	23	6,4		
Total		359	100,0		

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	22	6,1	6,6	6,6
	Disagree	71	19,8	21,2	27,8
	Uncertain	125	34,8	37,3	65,1
	Agree	73	20,3	21,8	86,9
	Strongly agree	44	12,3	13,1	100,0
	Total	335	93,3	100,0	
Missing	0	24	6,7		
Total		359	100,0		

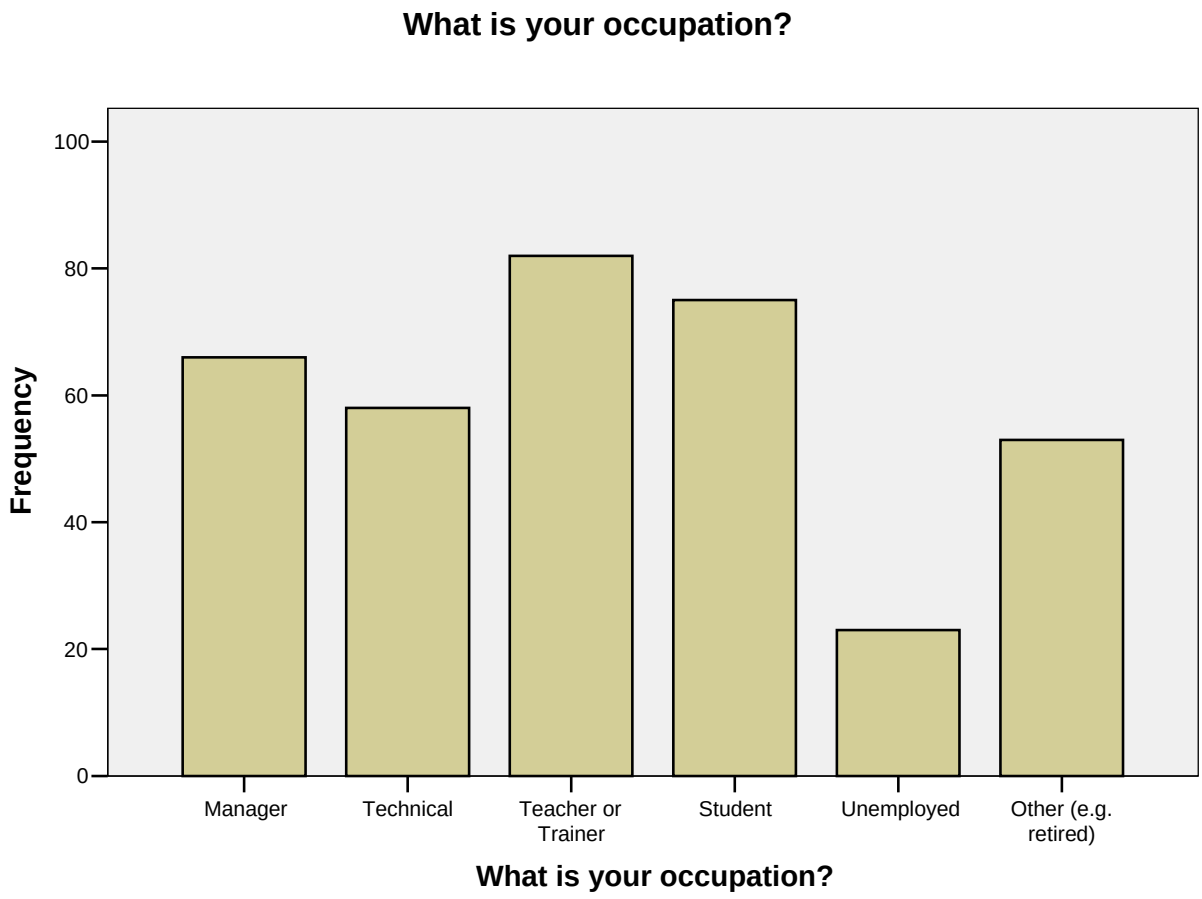
Study at an Open University is especially of advantage to adults who have work and family obligations

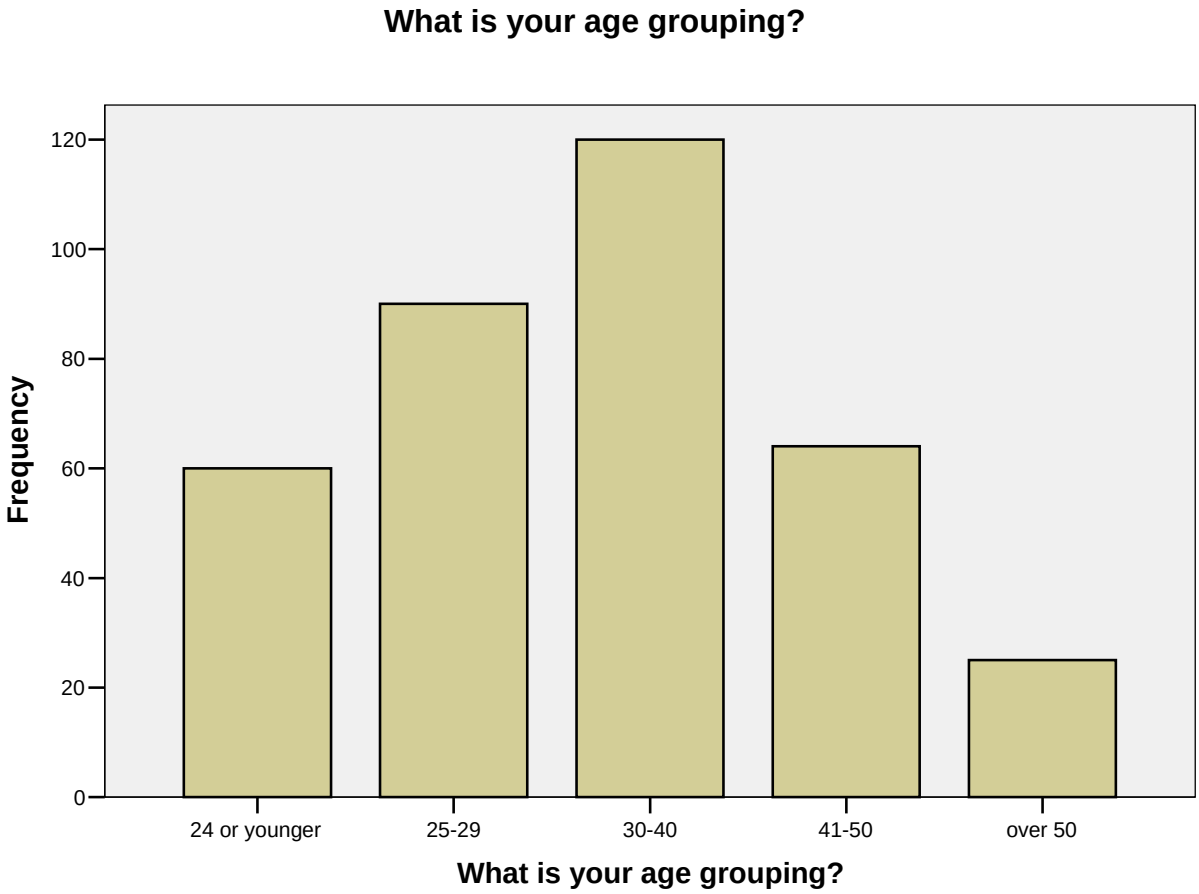
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	1,4	1,5	1,5
	Disagree	5	1,4	1,5	3,0
	Uncertain	10	2,8	3,0	5,9
	Agree	57	15,9	16,9	22,8
	Strongly agree	260	72,4	77,2	100,0
	Total	337	93,9	100,0	
Missing	0	22	6,1		
Total		359	100,0		

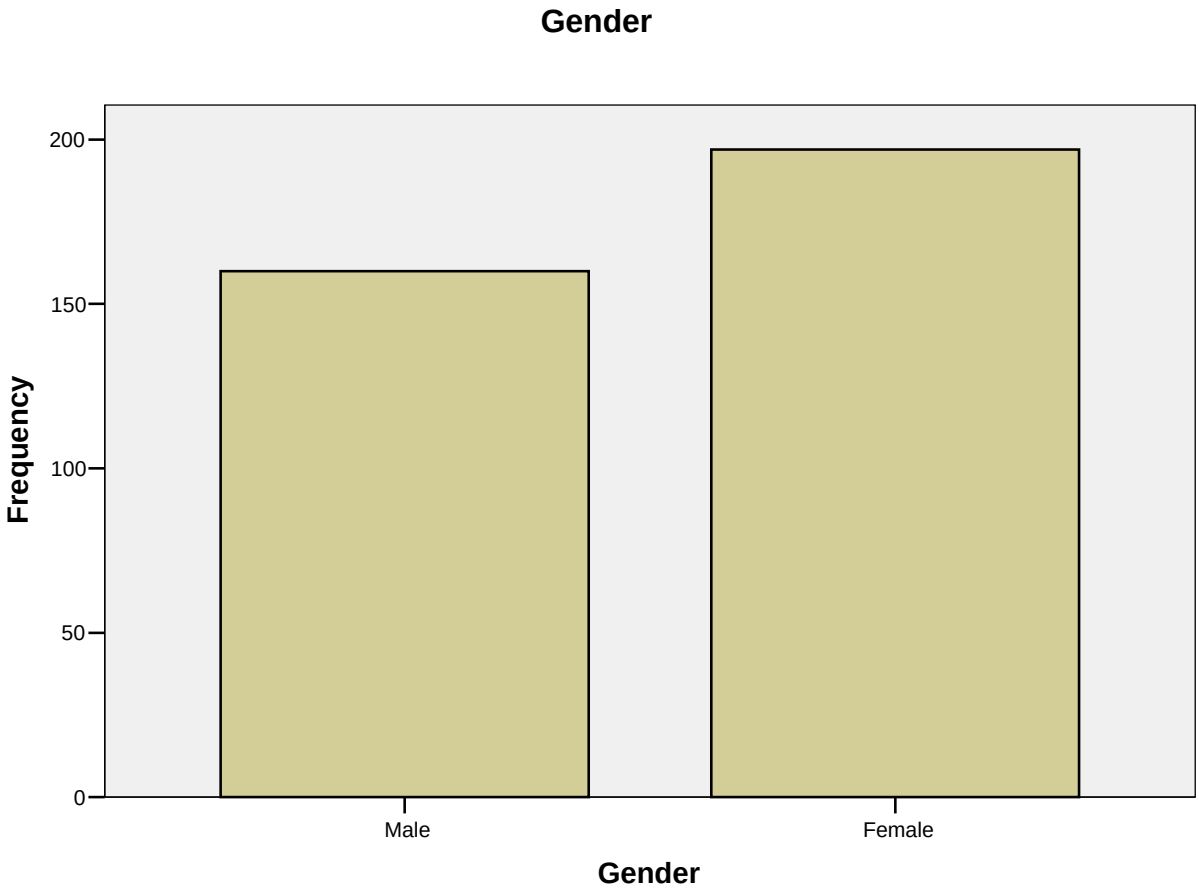
Main group/Control group

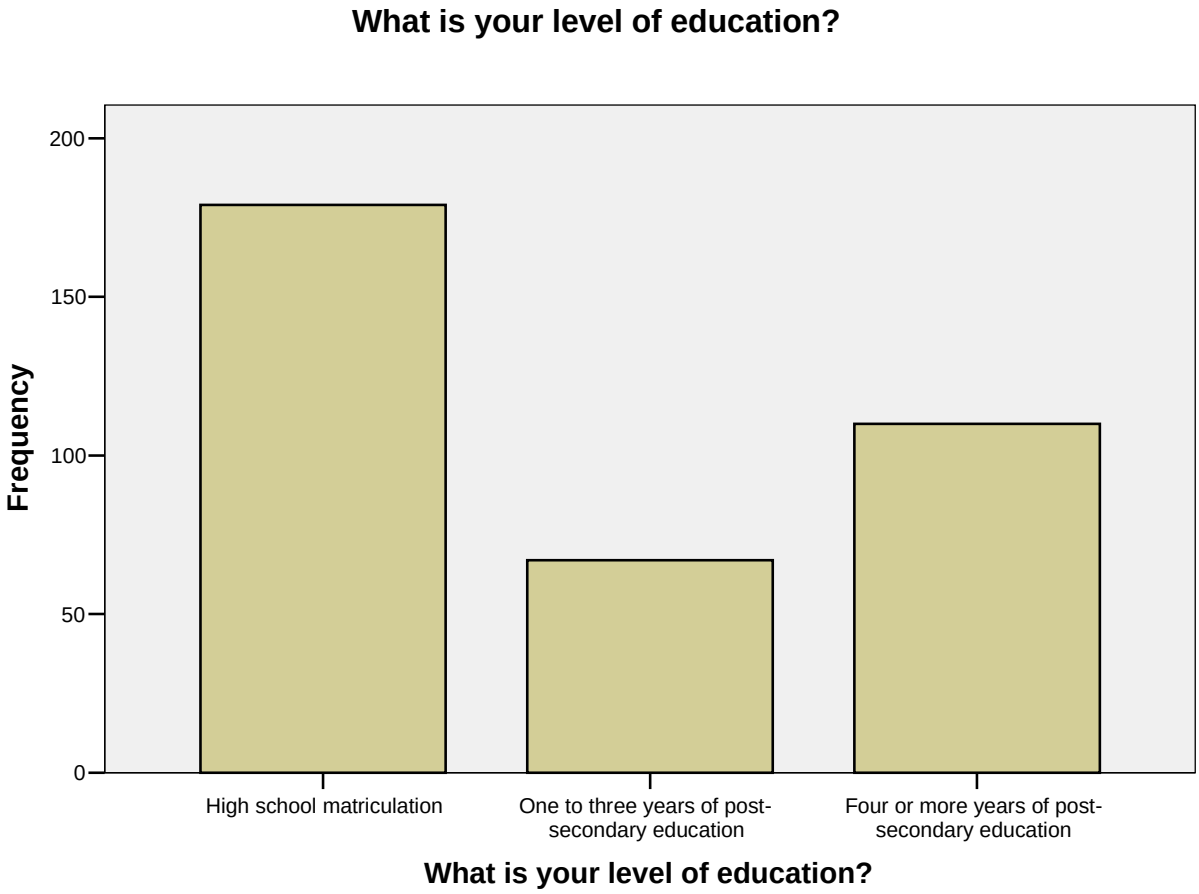
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Main group	183	51,0	51,0	51,0
	Control group	176	49,0	49,0	100,0
	Total	359	100,0	100,0	

Bar Chart

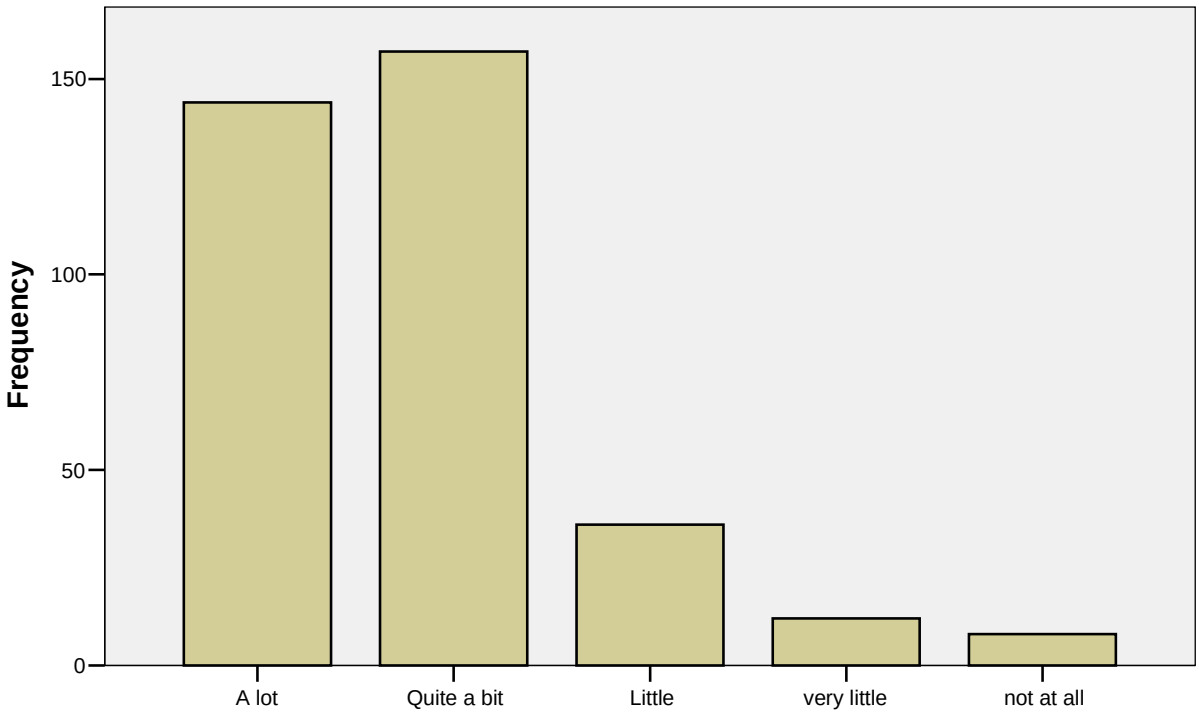



What is your age grouping?
Frequency
120
100
80
60
40
20
0
24 or younger
25-29
30-40
41-50
over 50
What is your age grouping?


Gender
200
150
100
50
0
Frequency
Male
Female
Gender

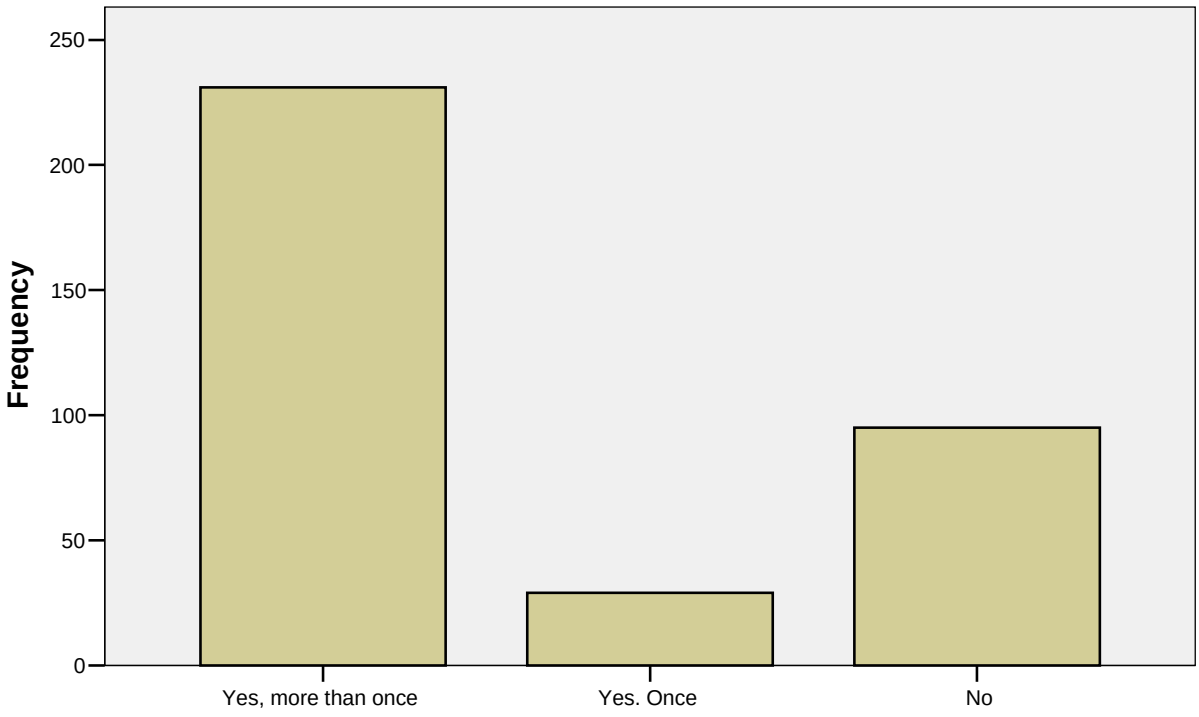

What is your level of education?
Frequency
200
150
100
50
0
High school matriculation
One to three years of post-secondary education
Four or more years of post-secondary education
What is your level of education?

To what extent have you used advanced technological equipment in your professional life?



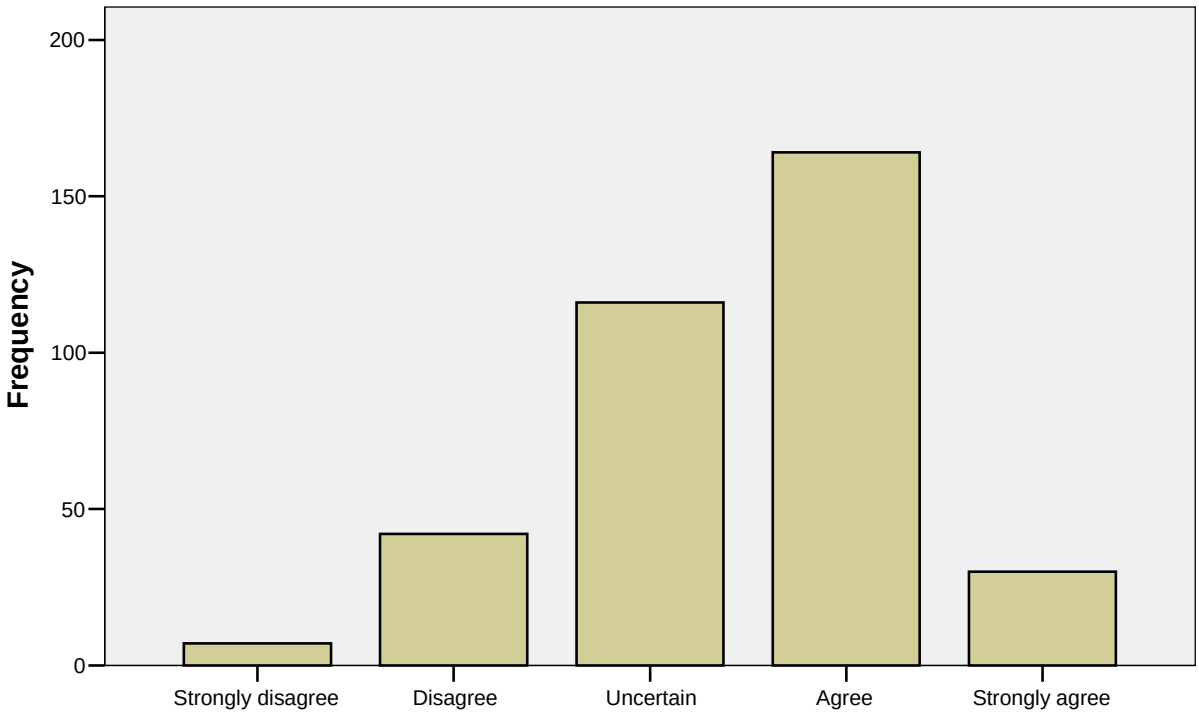
To what extent have you used advanced technological equipment in your professional life?

Have you had to change your way of working because of technological developments?

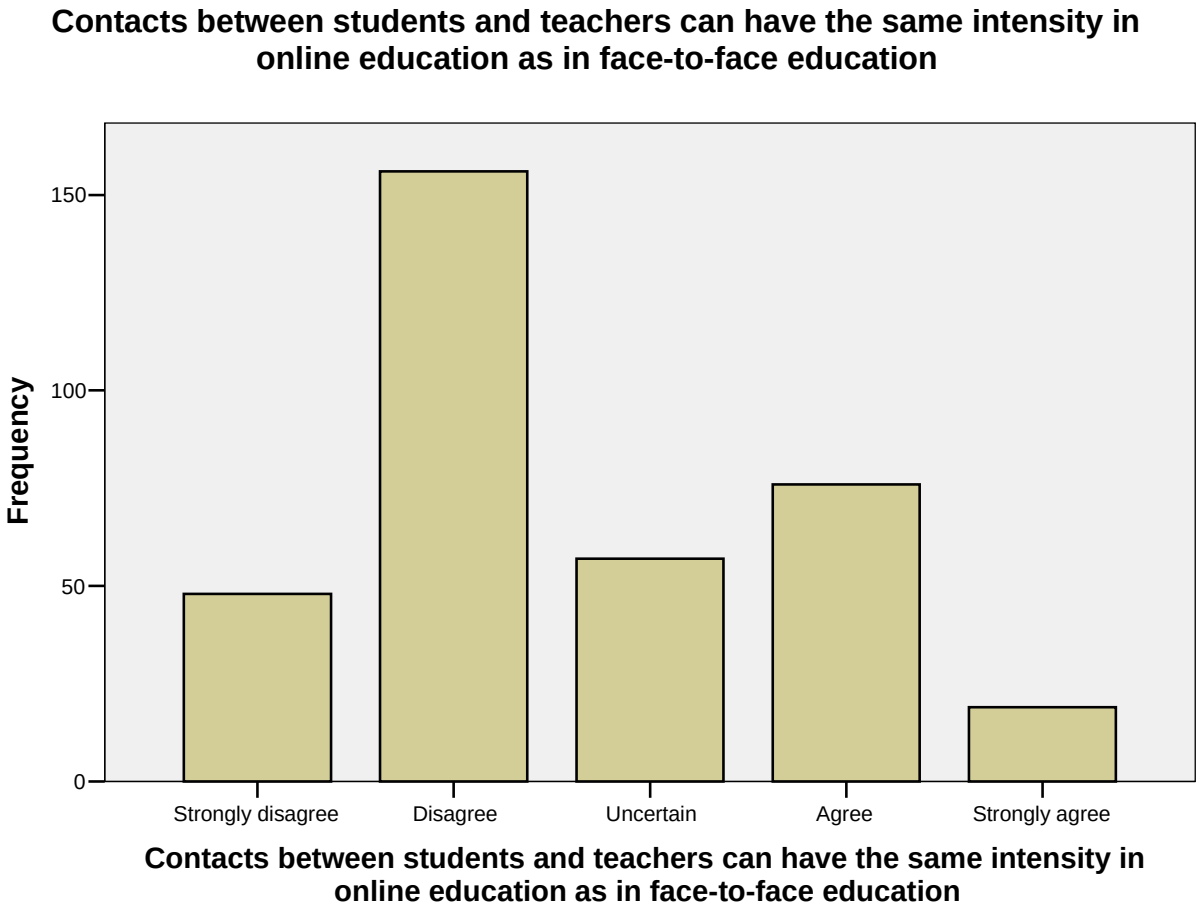


Have you had to change your way of working because of technological developments?

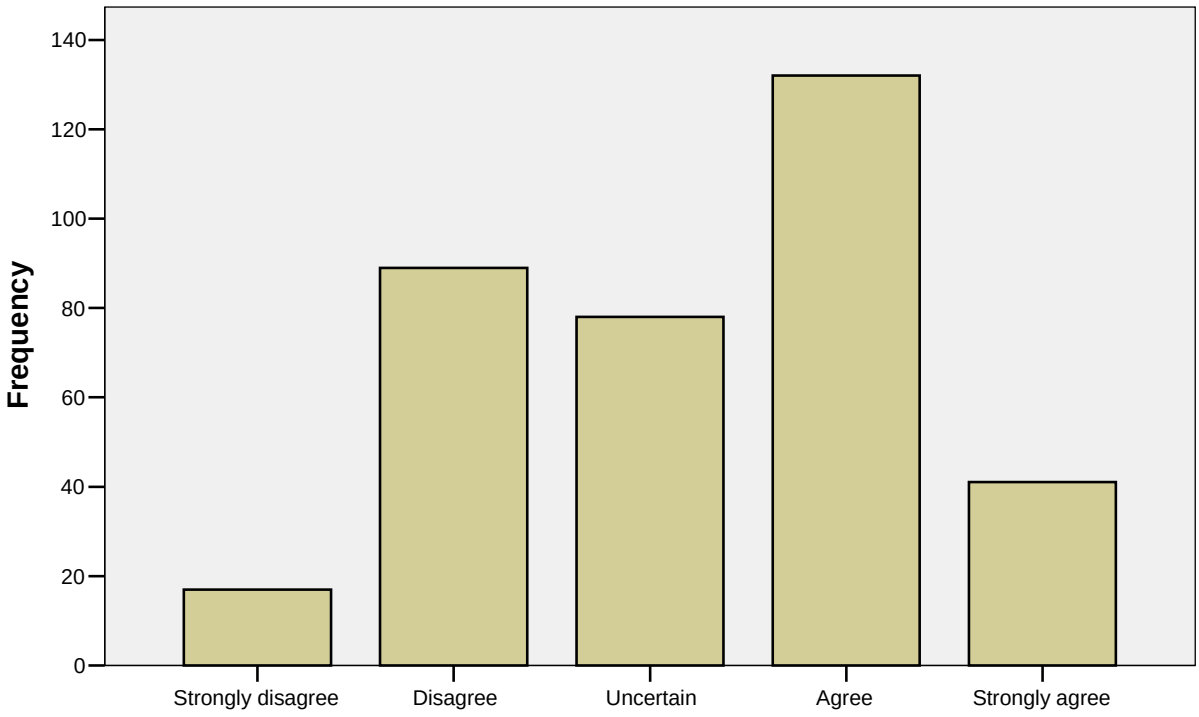
Thanks to technology, the problems of access to learning for students with disabilities have been resolved



Thanks to technology, the problems of access to learning for students with disabilities have been resolved

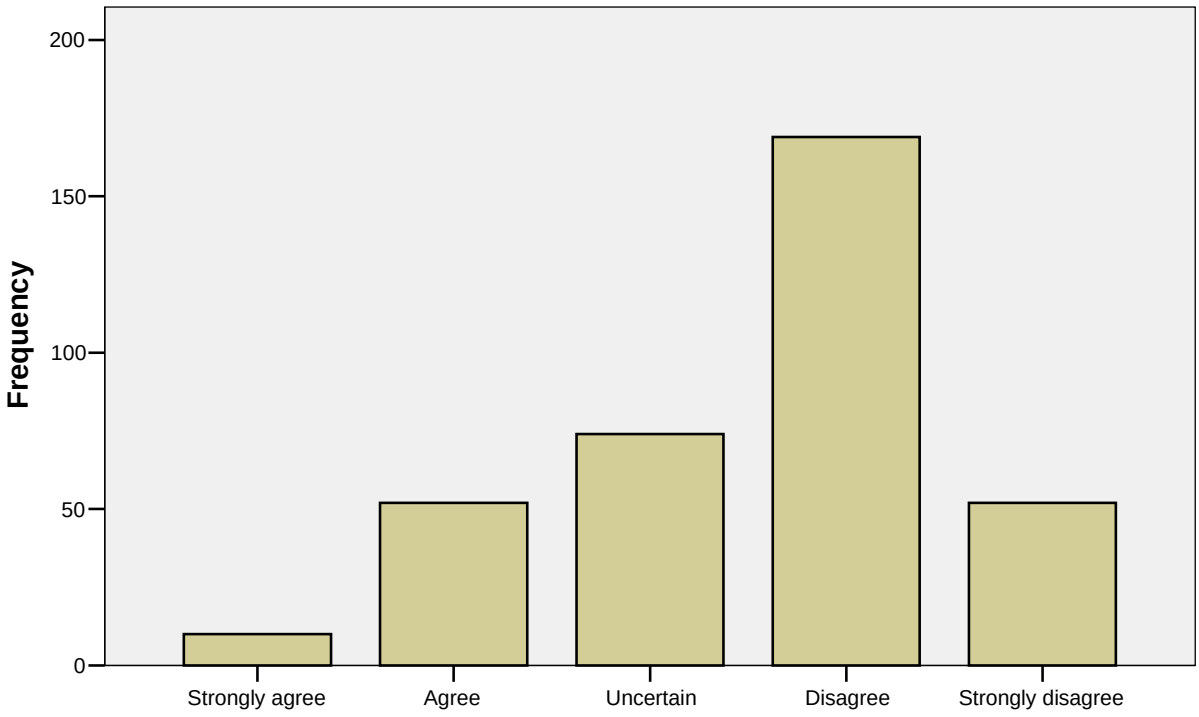

Contacts between students and teachers can have the same intensity in online education as in face-to-face education
Frequency
150
100
50
0
Strongly disagree
Disagree
Uncertain
Agree
Strongly agree
Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education



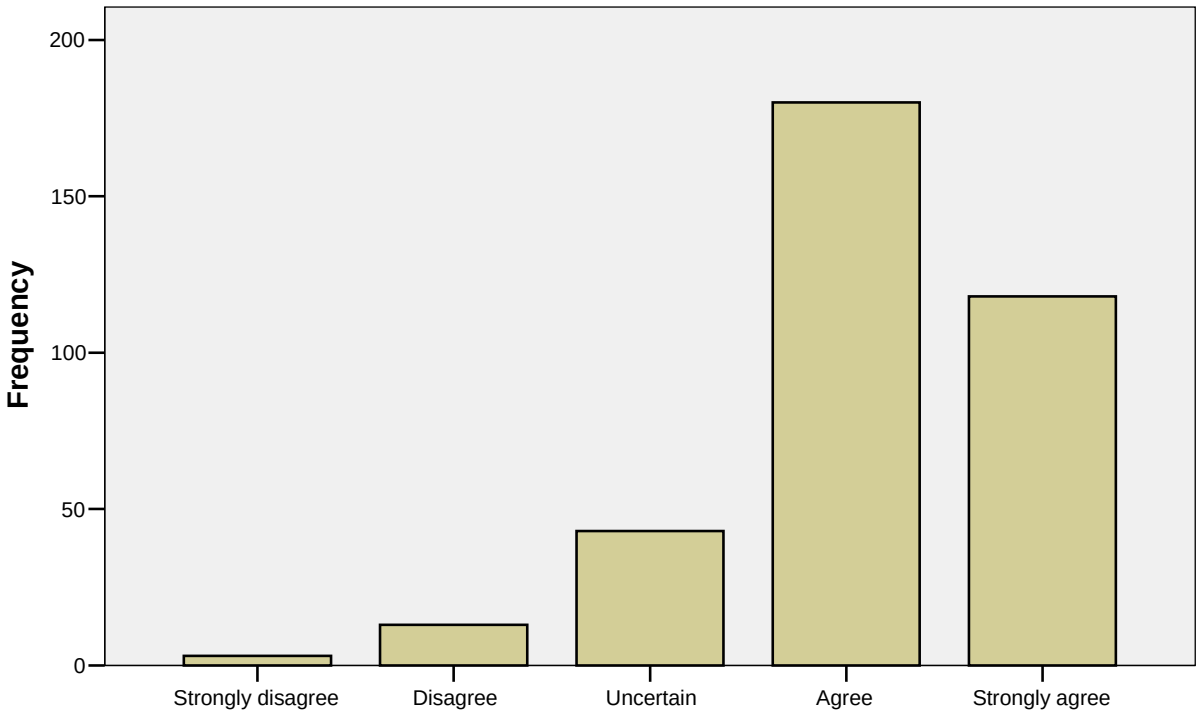
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Only optimistic people think that the impact of technology on learning is beneficial



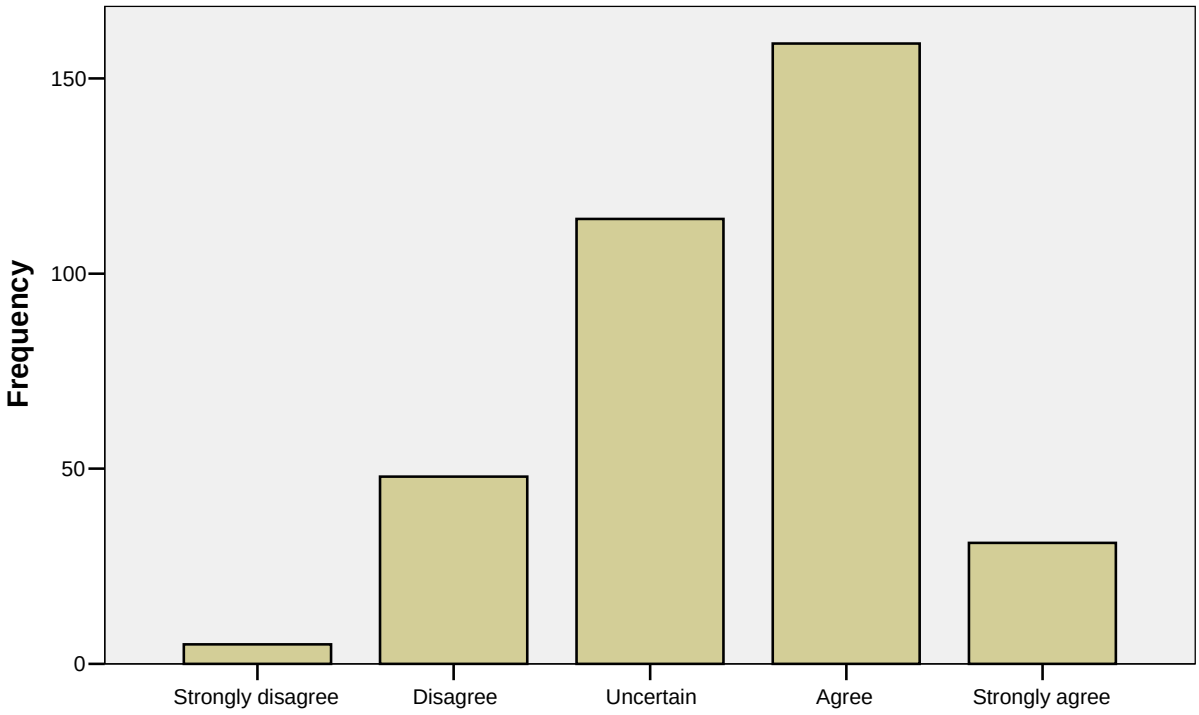
Only optimistic people think that the impact of technology on learning is beneficial

From my personal study experience I find that the impact of technology on learning is valuable



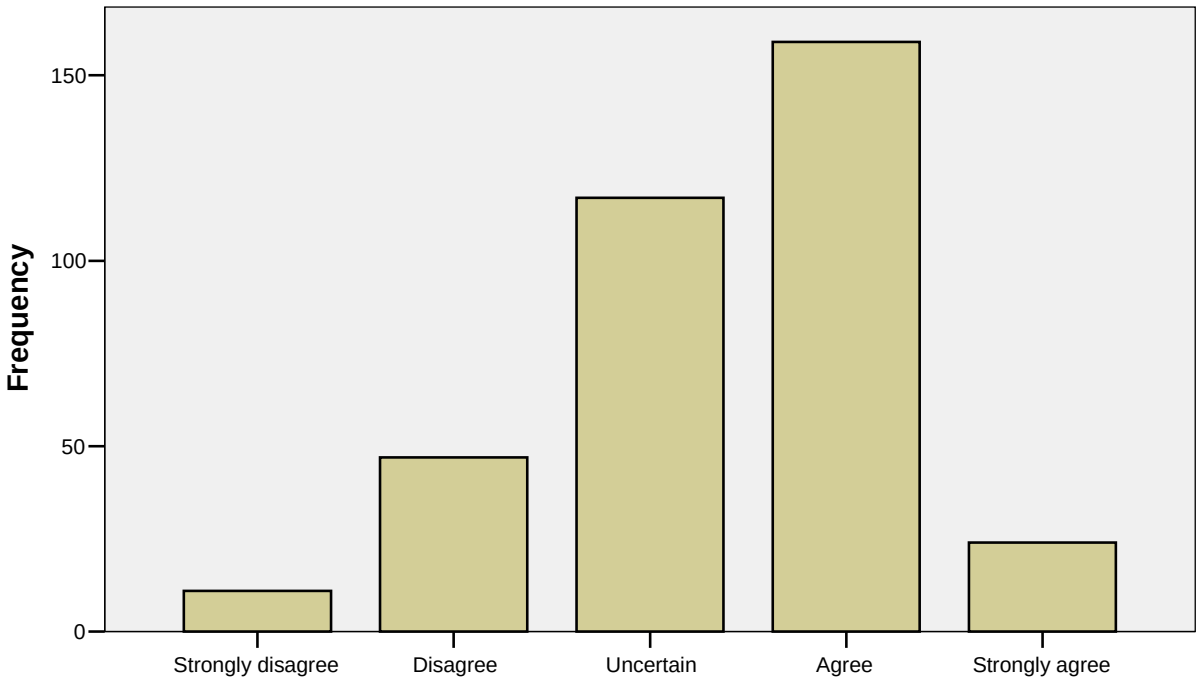
From my personal study experience I find that the impact of technology on learning is valuable

Information and communications technology has usually been used to encourage us to be active participants in learning



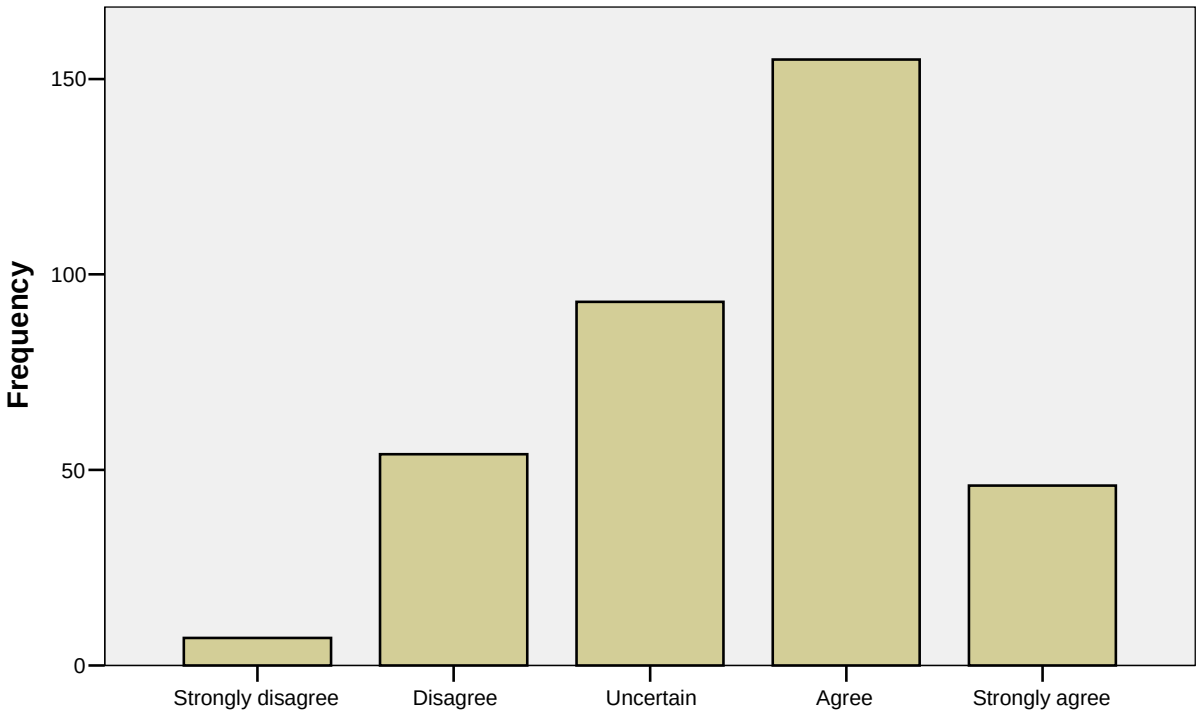
Information and communications technology has usually been used to encourage us to be active participants in learning

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving



Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs



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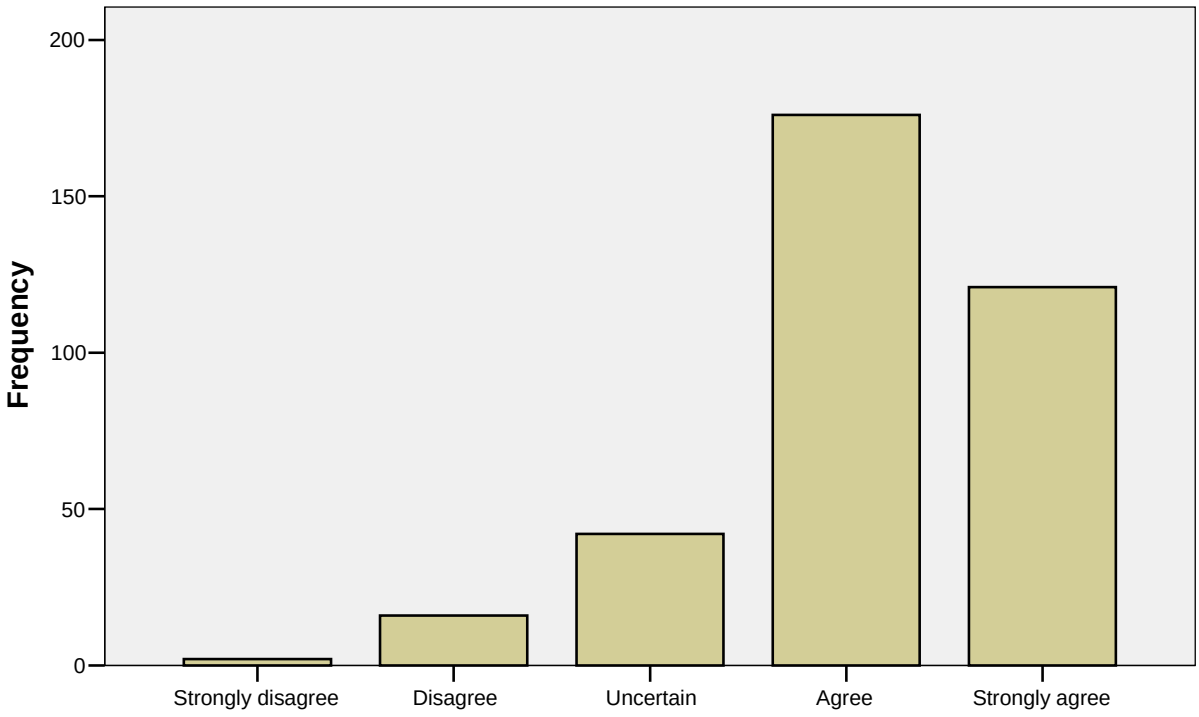
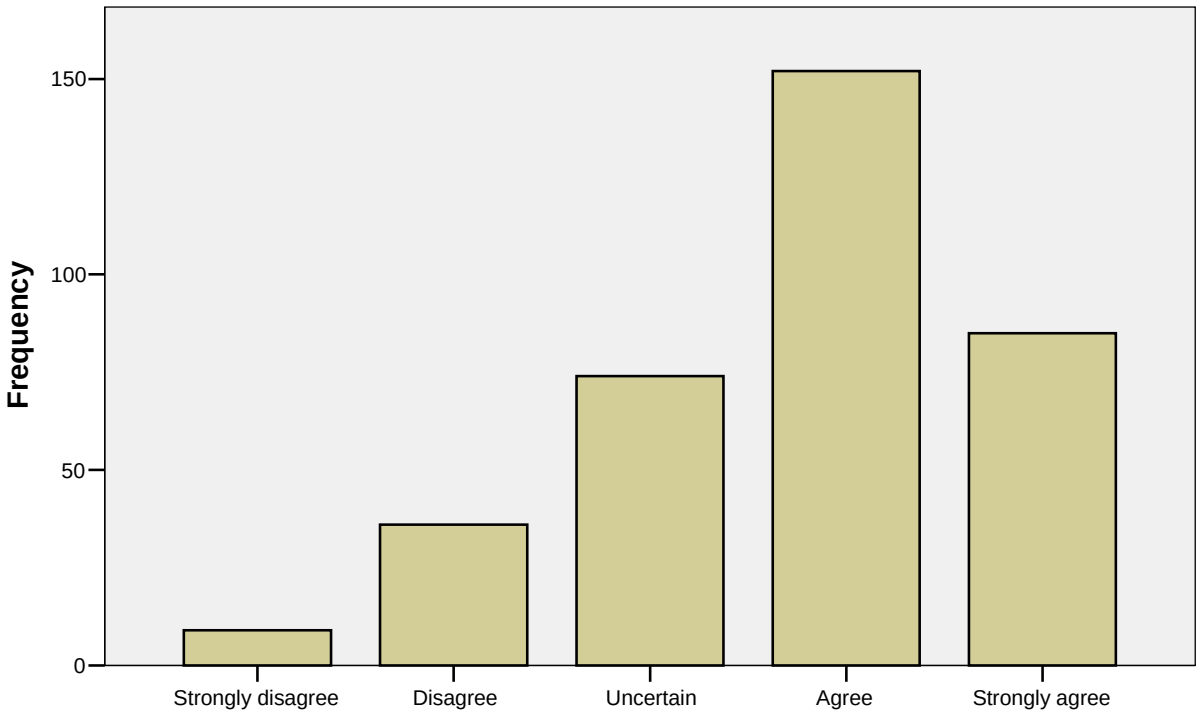
Learning is enhanced when text and pictures are integrated in a multimedia environment



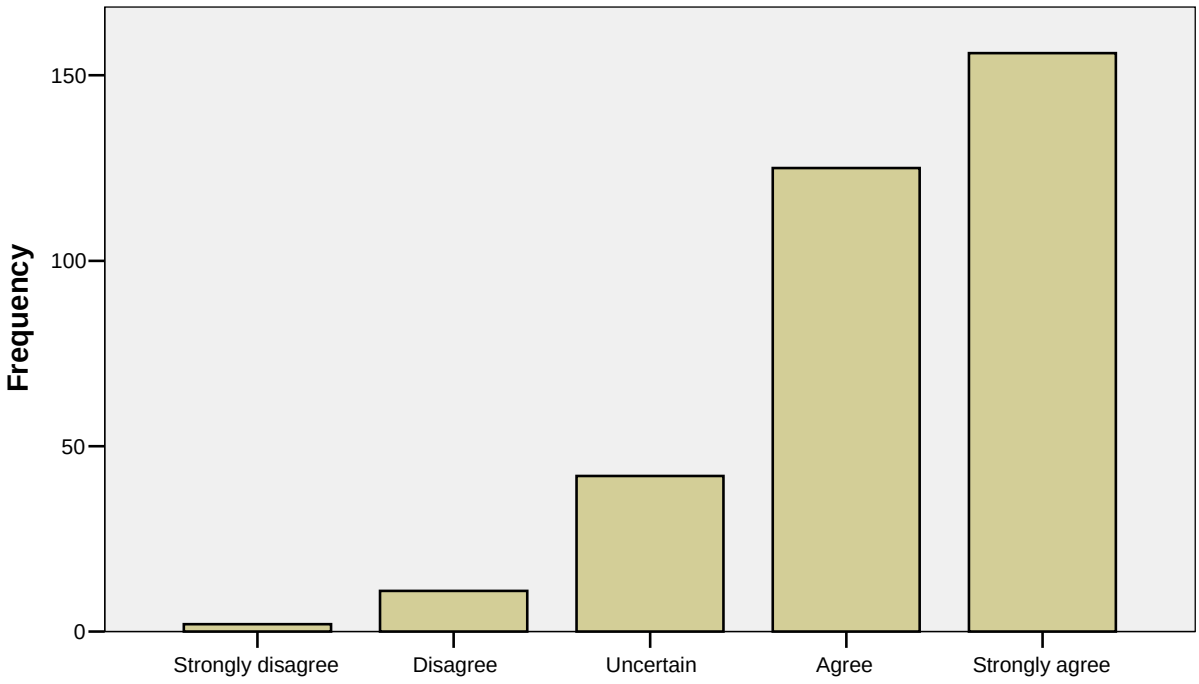
Learning is enhanced when text and pictures are integrated in a multimedia environment

Educational games motivate learners and contribute to developing skills such as teamwork



Educational games motivate learners and contribute to developing skills such as teamwork

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education



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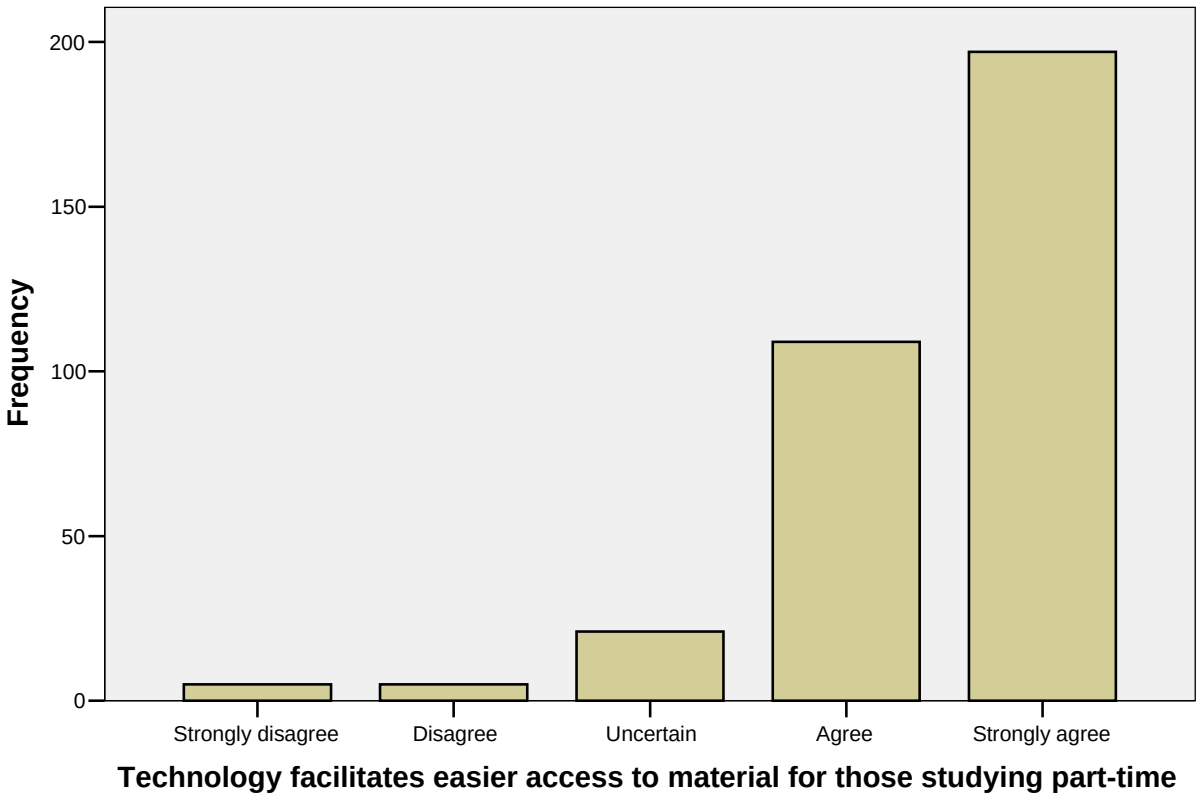
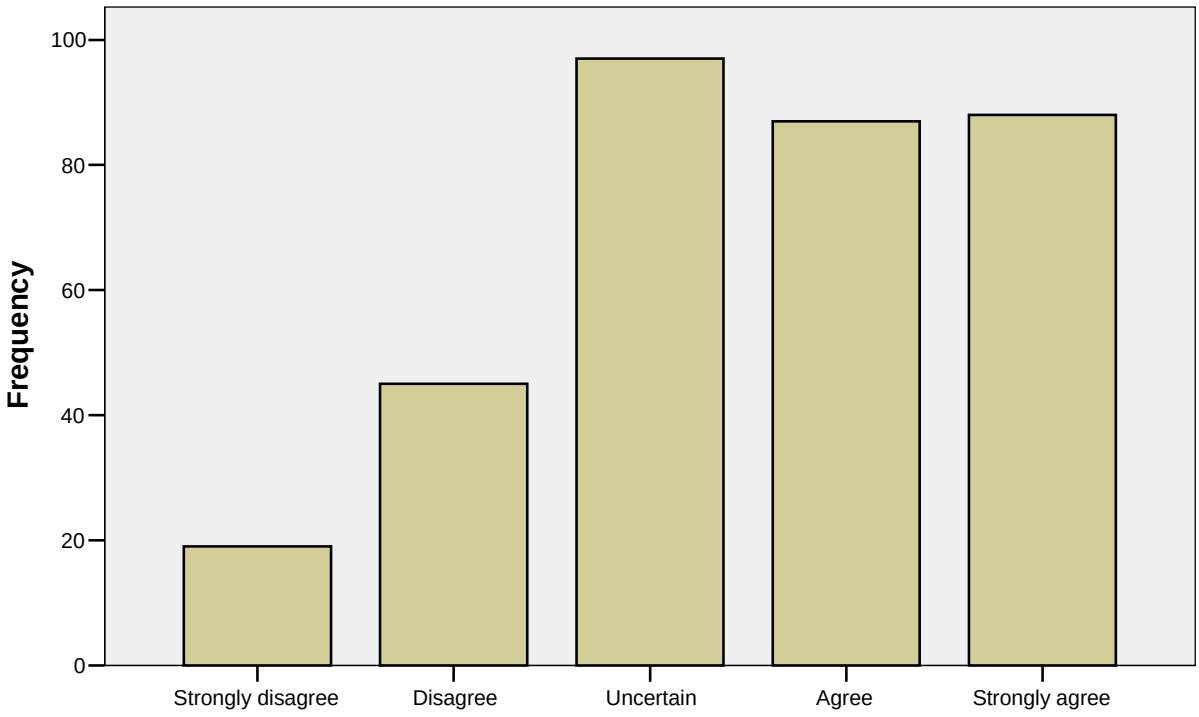
Technology facilitates easier access to material for those studying part-time



University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities



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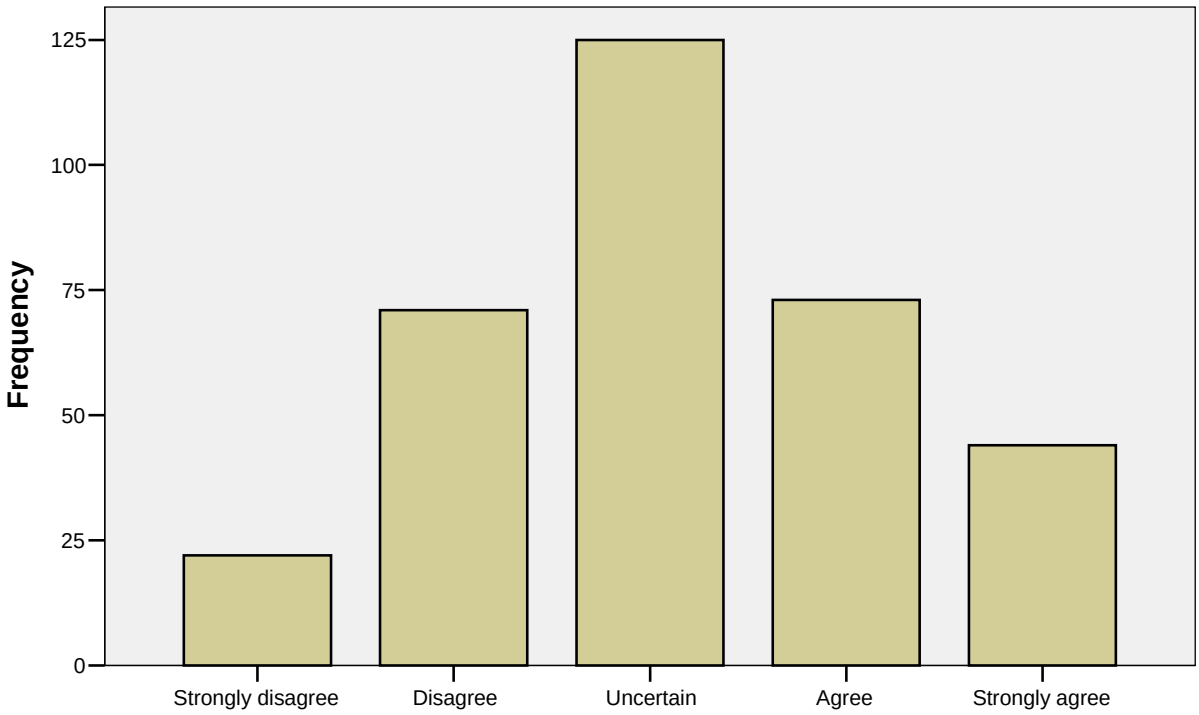
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university



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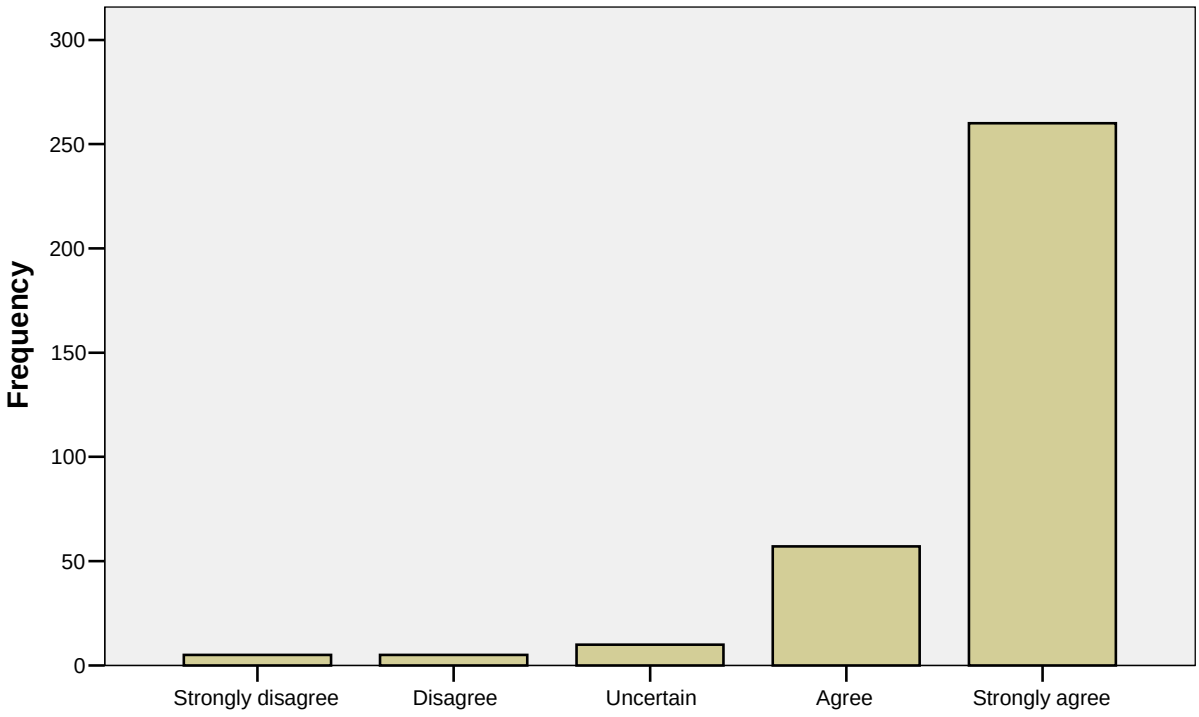
Study at an Open University is especially of advantage to adults who have work and family obligations



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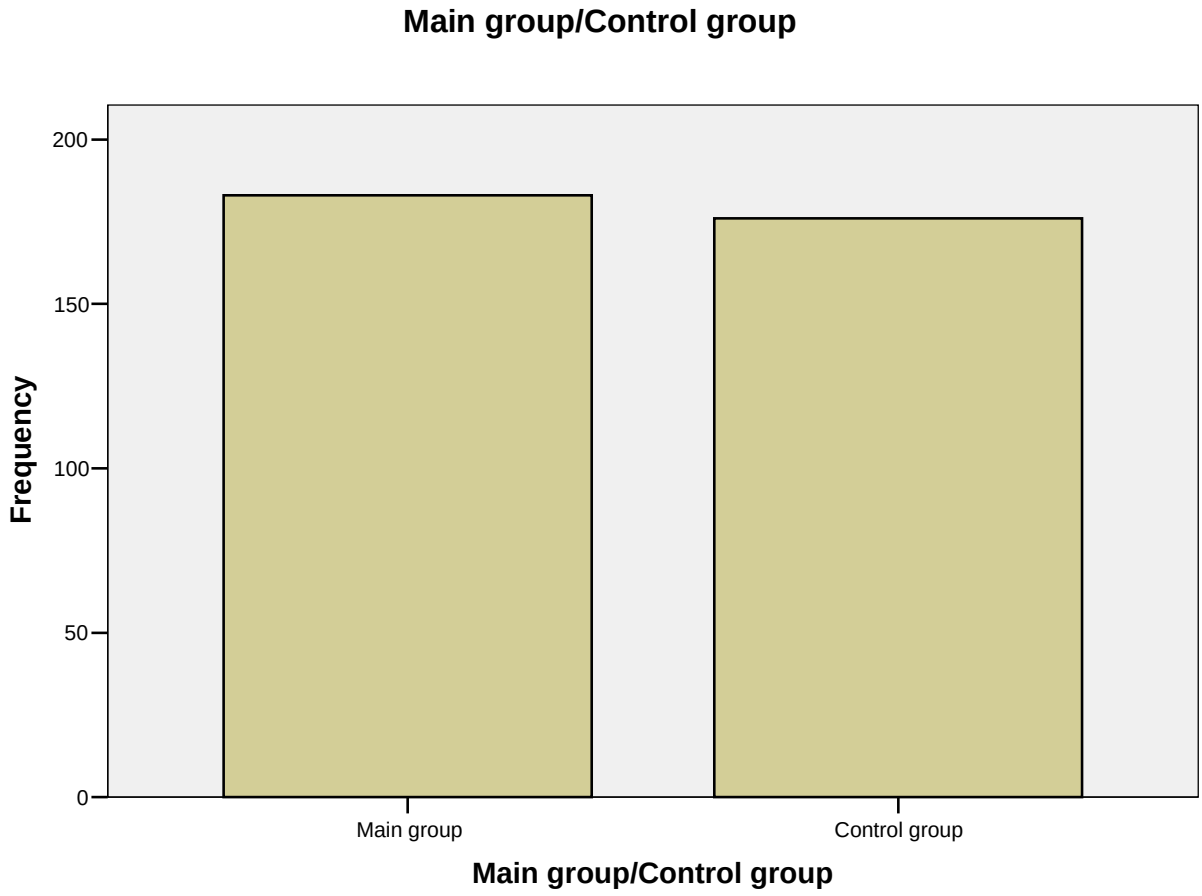


Frequencies

Main group/Control group = Main group

Statistics[a]

		What is your occupation?	What is your age grouping?	Gender	What is your level of education?	To what extent have you used advanced technological equipment in your professional life?	Have you had to change your way of working because of technological developments?
N	Valid	183	183	183	183	183	183
	Missing	0	0	0	0	0	0

Statistics[a]

		Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Only optimistic people think that the impact of technology on learning is beneficial	From my personal study experience I find that the impact of technology on learning is valuable
N	Valid	183	183	183	183	183
	Missing	0	0	0	0	0

Statistics[a]

		Information and communications technology has usually been used to encourage us to be active participants in learning	Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Learning is enhanced when text and pictures are integrated in a multimedia environment	Educational games motivate learners and contribute to developing skills such as teamwork
N	Valid	183	183	183	183	183
	Missing	0	0	0	0	0

Statistics[a]

		The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Technology facilitates easier access to material for those studying part-time	University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university
N	Valid	183	183	183	183
	Missing	0	0	0	0

Statistics[a]

		Study at an Open University is especially of advantage to adults who have work and family obligations	Main group/Control group
N	Valid	183	183
	Missing	0	0

a. Main group/Control group = Main group

Frequency Table

What is your occupation?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manager	36	19,7	19,7	19,7
	Technical	47	25,7	25,7	45,4
	Teacher or Trainer	16	8,7	8,7	54,1
	Student	16	8,7	8,7	62,8
	Unemployed	15	8,2	8,2	71,0
	Other (e.g. retired)	53	29,0	29,0	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

What is your age grouping?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24 or younger	17	9,3	9,3	9,3
	25-29	47	25,7	25,7	35,0
	30-40	81	44,3	44,3	79,2
	41-50	35	19,1	19,1	98,4
	over 50	3	1,6	1,6	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Gender[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	94	51,4	51,4	51,4
	Female	89	48,6	48,6	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

What is your level of education?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school matriculation	100	54,6	54,6	54,6
	One to three years of post-secondary education	30	16,4	16,4	71,0
	Four or more years of post-secondary education	53	29,0	29,0	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

To what extent have you used advanced technological equipment in your professional life?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	74	40,4	40,4	40,4
	Quite a bit	89	48,6	48,6	89,1
	Little	12	6,6	6,6	95,6
	very little	4	2,2	2,2	97,8
	not at all	4	2,2	2,2	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Have you had to change your way of working because of technological developments?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, more than once	131	71,6	71,6	71,6
	Yes. Once	12	6,6	6,6	78,1
	No	40	21,9	21,9	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Thanks to technology, the problems of access to learning for students with disabilities have been resolved[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	1,6	1,6	1,6
	Disagree	18	9,8	9,8	11,5
	Uncertain	54	29,5	29,5	41,0
	Agree	96	52,5	52,5	93,4
	Strongly agree	12	6,6	6,6	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Contacts between students and teachers can have the same intensity in online education as in face-to-face education[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	15	8,2	8,2	8,2
	Disagree	72	39,3	39,3	47,5
	Uncertain	38	20,8	20,8	68,3
	Agree	43	23,5	23,5	91,8
	Strongly agree	15	8,2	8,2	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	8	4,4	4,4	4,4
	Disagree	40	21,9	21,9	26,2
	Uncertain	51	27,9	27,9	54,1
	Agree	59	32,2	32,2	86,3
	Strongly agree	25	13,7	13,7	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Only optimistic people think that the impact of technology on learning is beneficial[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	5	2,7	2,7	2,7
	Agree	20	10,9	10,9	13,7
	Uncertain	38	20,8	20,8	34,4
	Disagree	78	42,6	42,6	77,0
	Strongly disagree	42	23,0	23,0	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

From my personal study experience I find that the impact of technology on learning is valuable[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	,5	,5	,5
	Disagree	5	2,7	2,7	3,3
	Uncertain	27	14,8	14,8	18,0
	Agree	88	48,1	48,1	66,1
	Strongly agree	62	33,9	33,9	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Information and communications technology has usually been used to encourage us to be active participants in learning[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	1,6	1,6	1,6
	Disagree	22	12,0	12,0	13,7
	Uncertain	64	35,0	35,0	48,6
	Agree	80	43,7	43,7	92,3
	Strongly agree	14	7,7	7,7	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	7	3,8	3,8	3,8
	Disagree	20	10,9	10,9	14,8
	Uncertain	67	36,6	36,6	51,4
	Agree	79	43,2	43,2	94,5
	Strongly agree	10	5,5	5,5	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	2,2	2,2	2,2
	Disagree	32	17,5	17,5	19,7
	Uncertain	57	31,1	31,1	50,8
	Agree	73	39,9	39,9	90,7
	Strongly agree	17	9,3	9,3	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Learning is enhanced when text and pictures are integrated in a multimedia environment[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	,5	,5	,5
	Disagree	12	6,6	6,6	7,1
	Uncertain	28	15,3	15,3	22,4
	Agree	78	42,6	42,6	65,0
	Strongly agree	64	35,0	35,0	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Educational games motivate learners and contribute to developing skills such as teamwork[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	2,7	2,7	2,7
	Disagree	28	15,3	15,3	18,0
	Uncertain	52	28,4	28,4	46,4
	Agree	73	39,9	39,9	86,3
	Strongly agree	25	13,7	13,7	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	1,6	1,6	1,6
	Uncertain	14	7,7	7,7	9,3
	Agree	69	37,7	37,7	47,0
	Strongly agree	97	53,0	53,0	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

Technology facilitates easier access to material for those studying part-time[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	2,7	2,7	2,7
	Disagree	2	1,1	1,1	3,8
	Uncertain	12	6,6	6,6	10,4
	Agree	64	35,0	35,0	45,4
	Strongly agree	100	54,6	54,6	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	1,6	1,6	1,6
	Disagree	14	7,7	7,7	9,3
	Uncertain	32	17,5	17,5	26,8
	Agree	63	34,4	34,4	61,2
	Strongly agree	71	38,8	38,8	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	2,2	2,2	2,2
	Disagree	33	18,0	18,0	20,2
	Uncertain	61	33,3	33,3	53,6
	Agree	48	26,2	26,2	79,8
	Strongly agree	37	20,2	20,2	100,0
	Total	183	100,0	100,0	

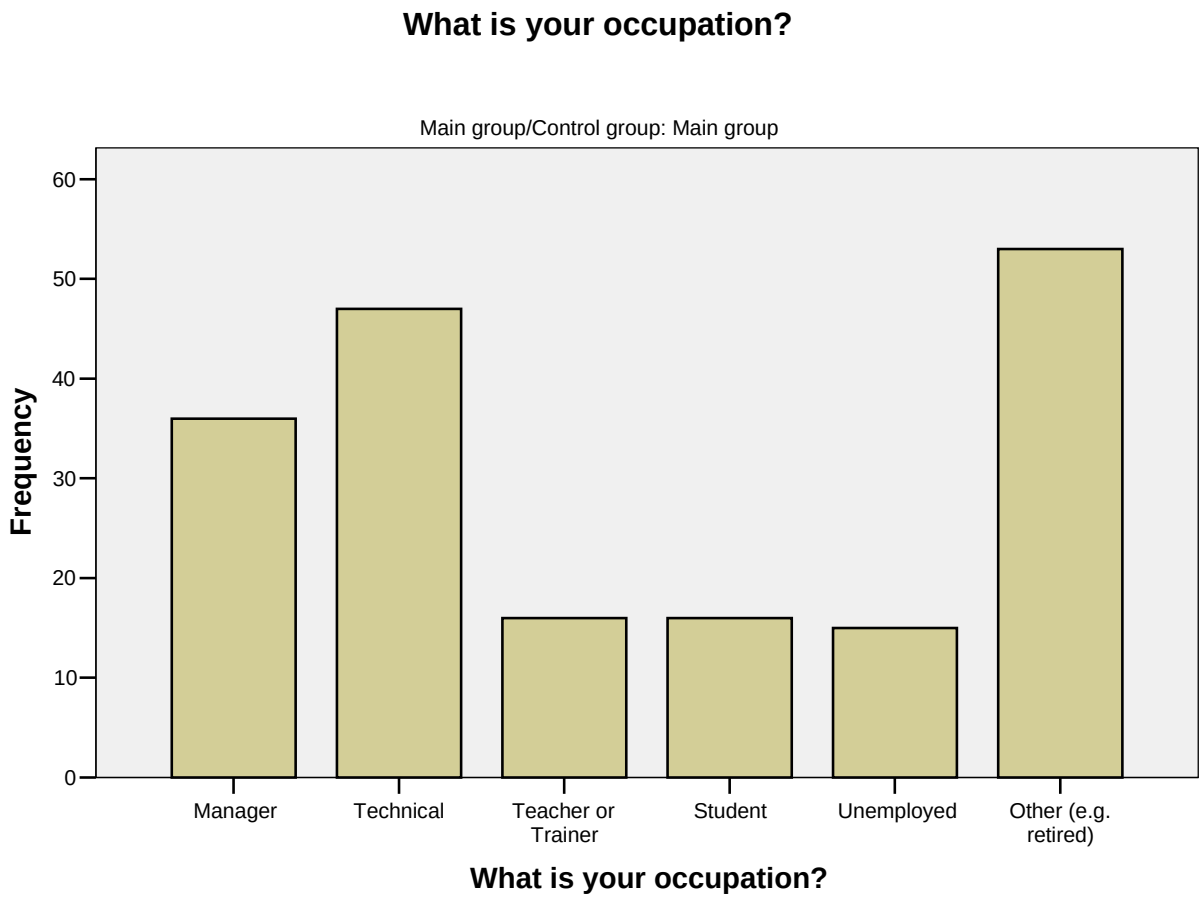
a. Main group/Control group = Main group

Study at an Open University is especially of advantage to adults who have work and family obligations[a]

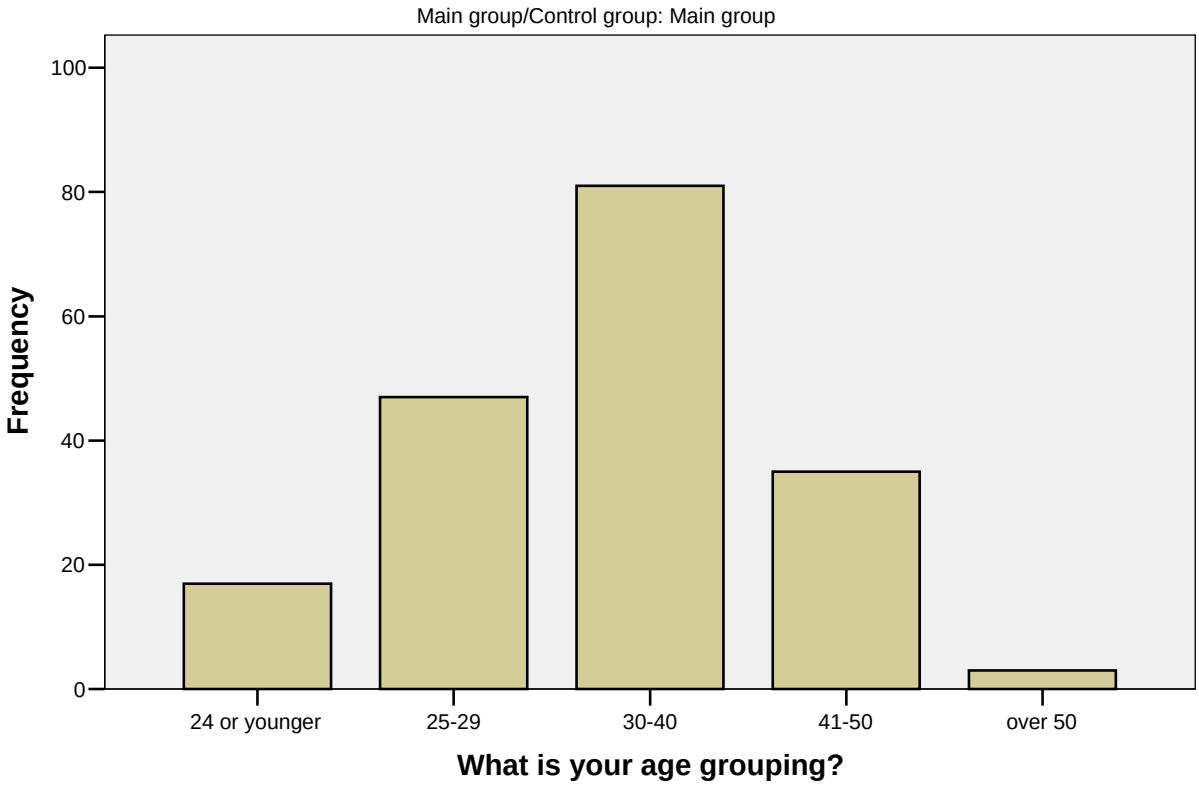
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	,5	,5	,5
	Disagree	1	,5	,5	1,1
	Uncertain	2	1,1	1,1	2,2
	Agree	14	7,7	7,7	9,8
	Strongly agree	165	90,2	90,2	100,0
	Total	183	100,0	100,0	

a. Main group/Control group = Main group

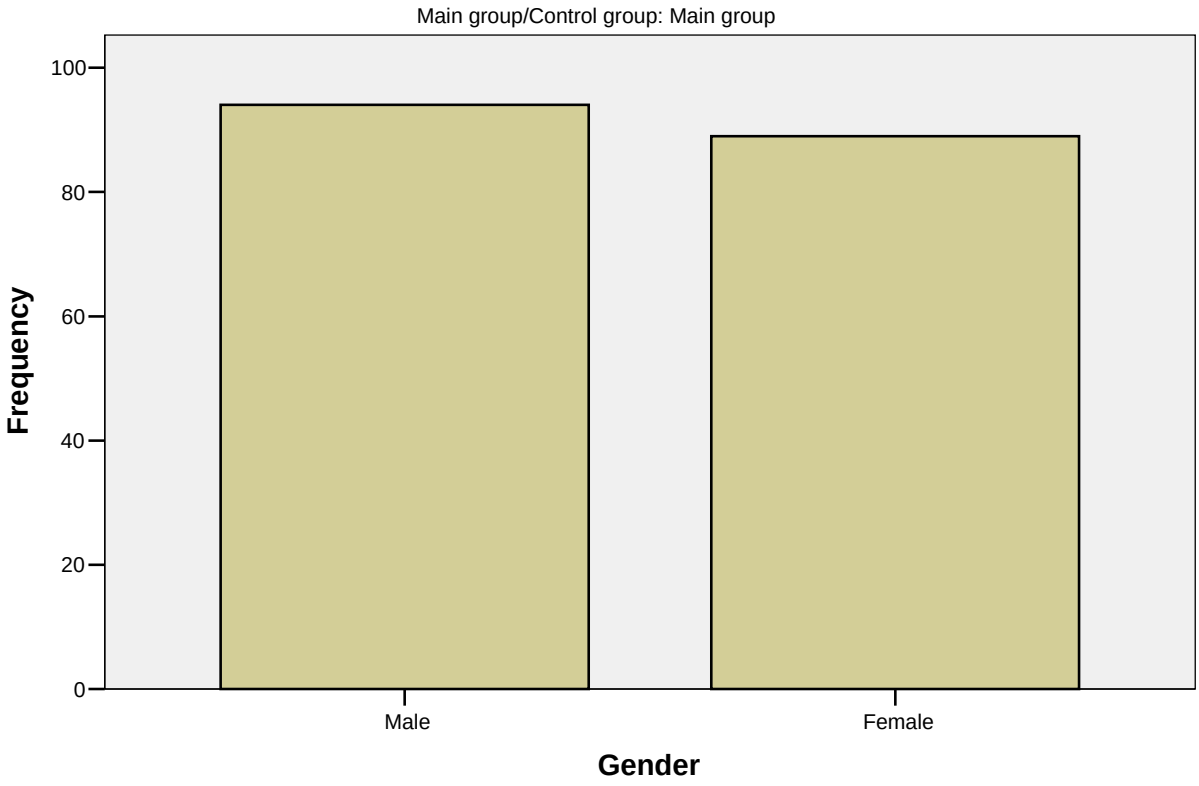
Bar Chart



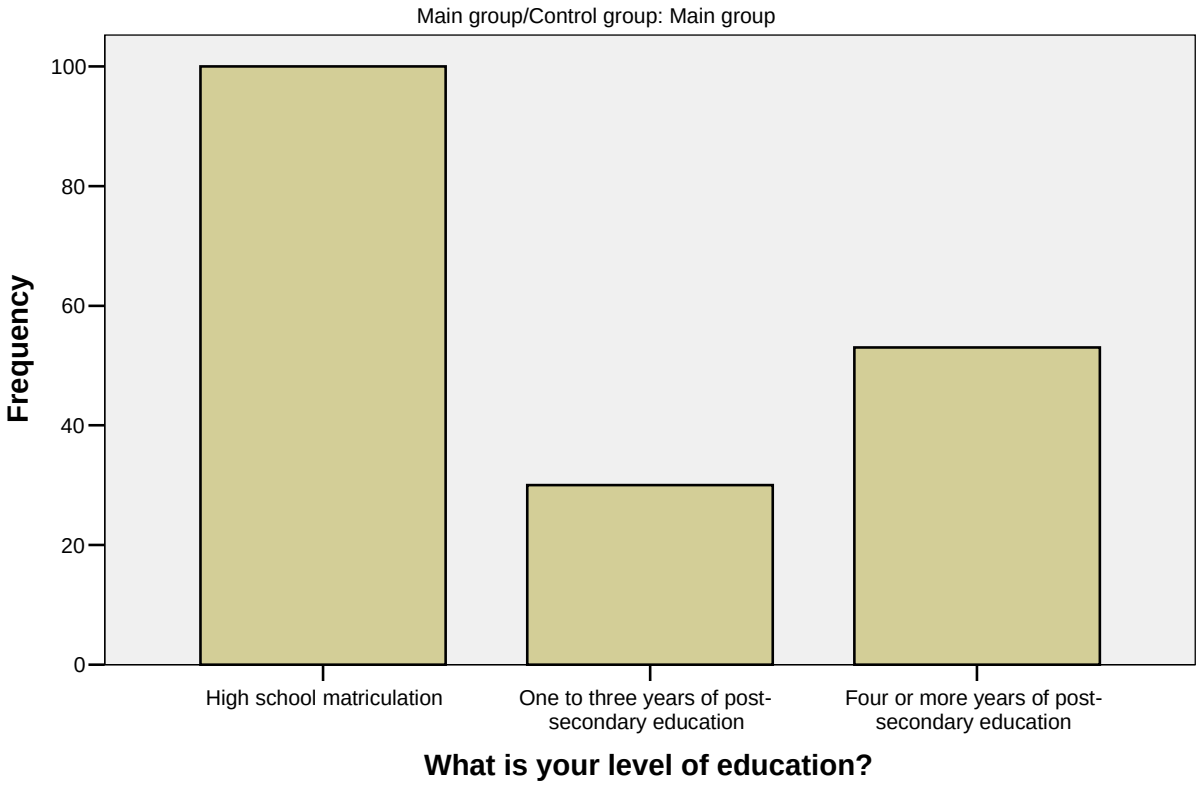
What is your age grouping?



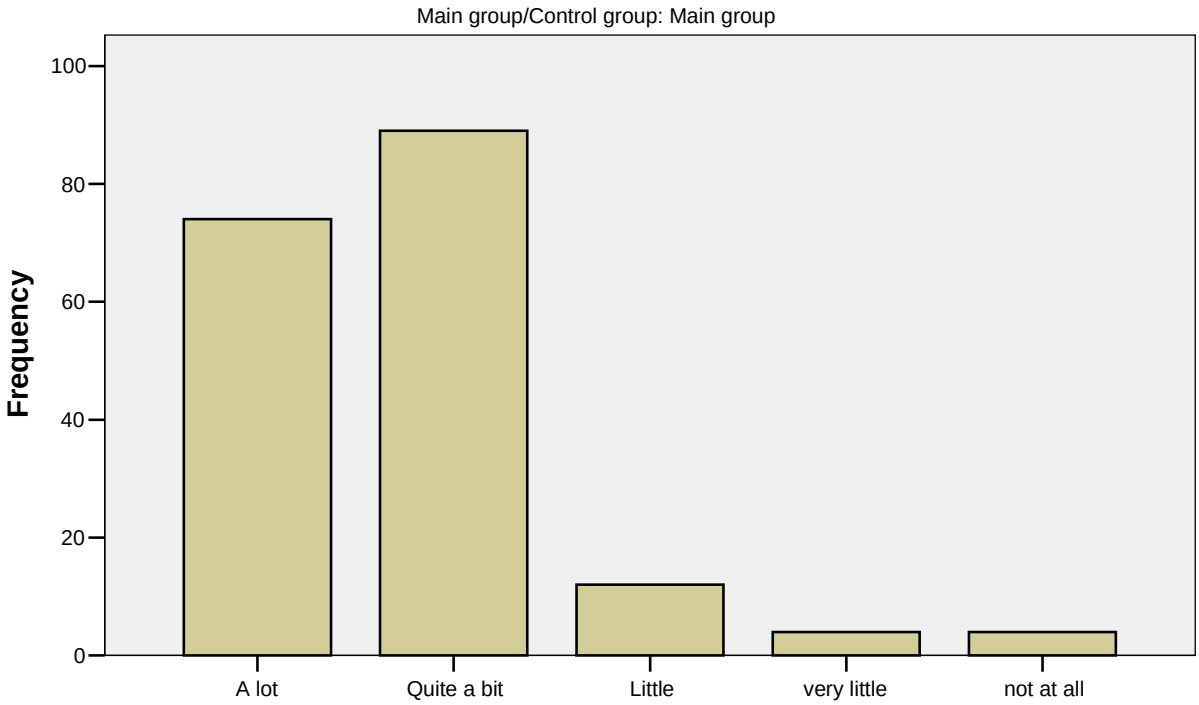
Gender


Main group/Control group: Main group
100
80
60
40
20
0
Frequency
Male
Female
Gender

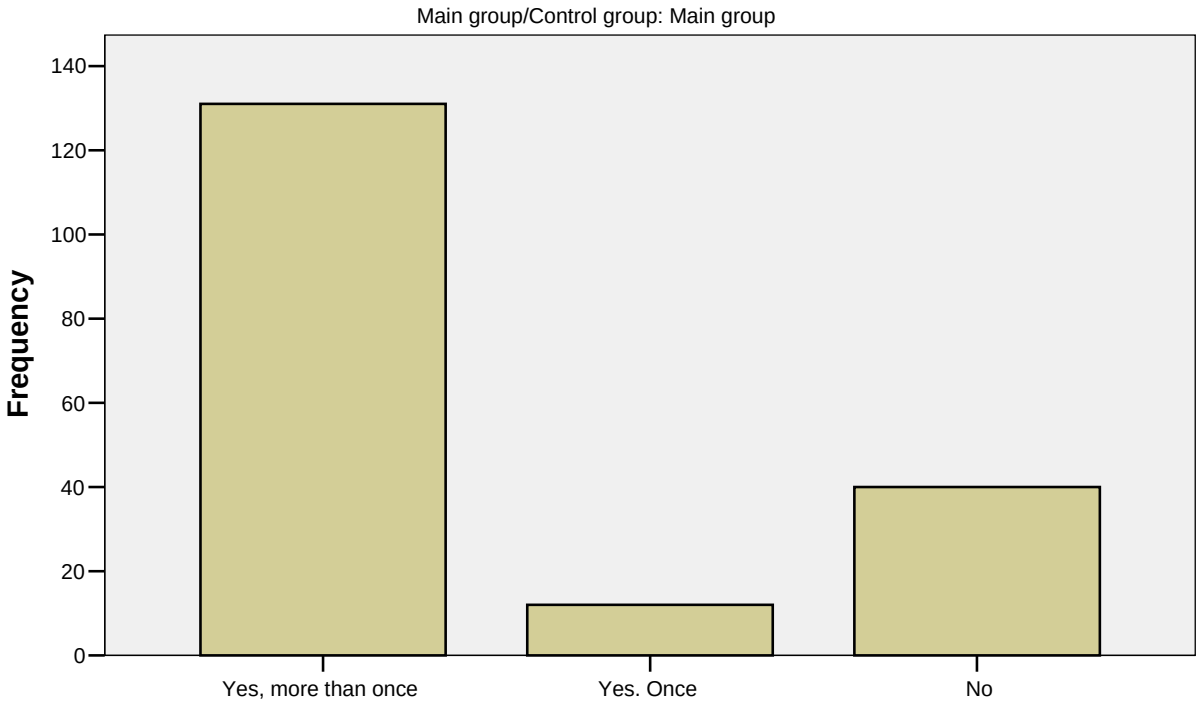
What is your level of education?



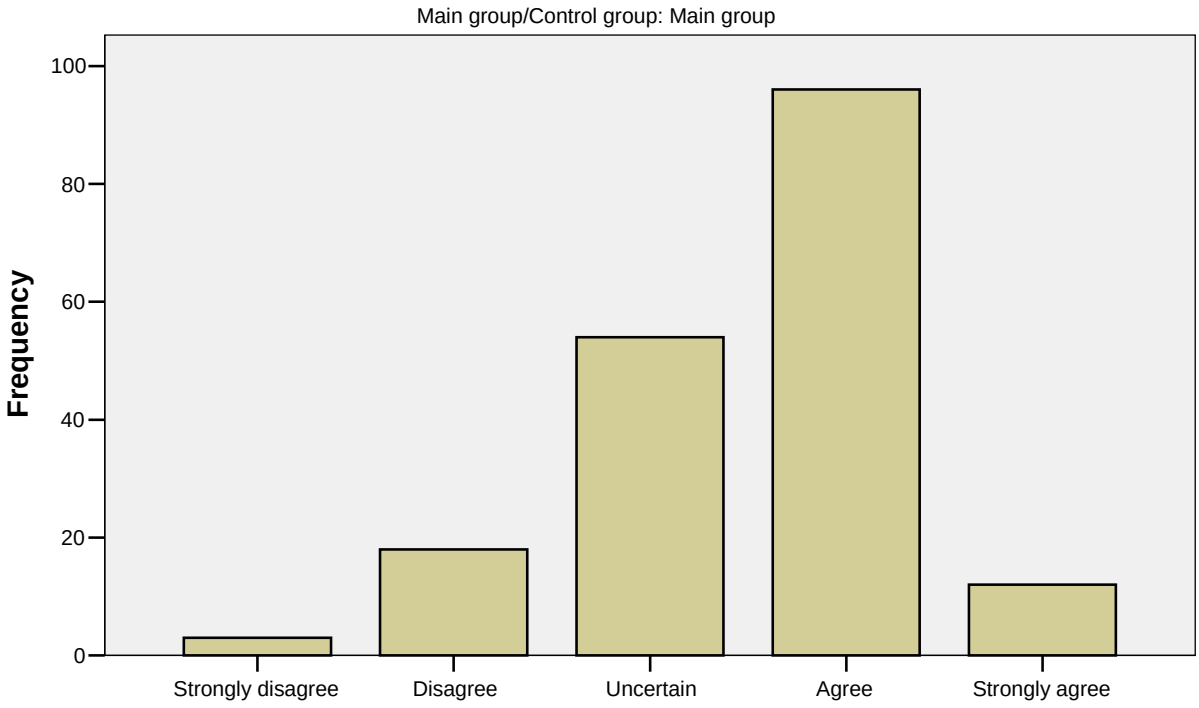
To what extent have you used advanced technological equipment in your professional life?



Have you had to change your way of working because of technological developments?



Thanks to technology, the problems of access to learning for students with disabilities have been resolved



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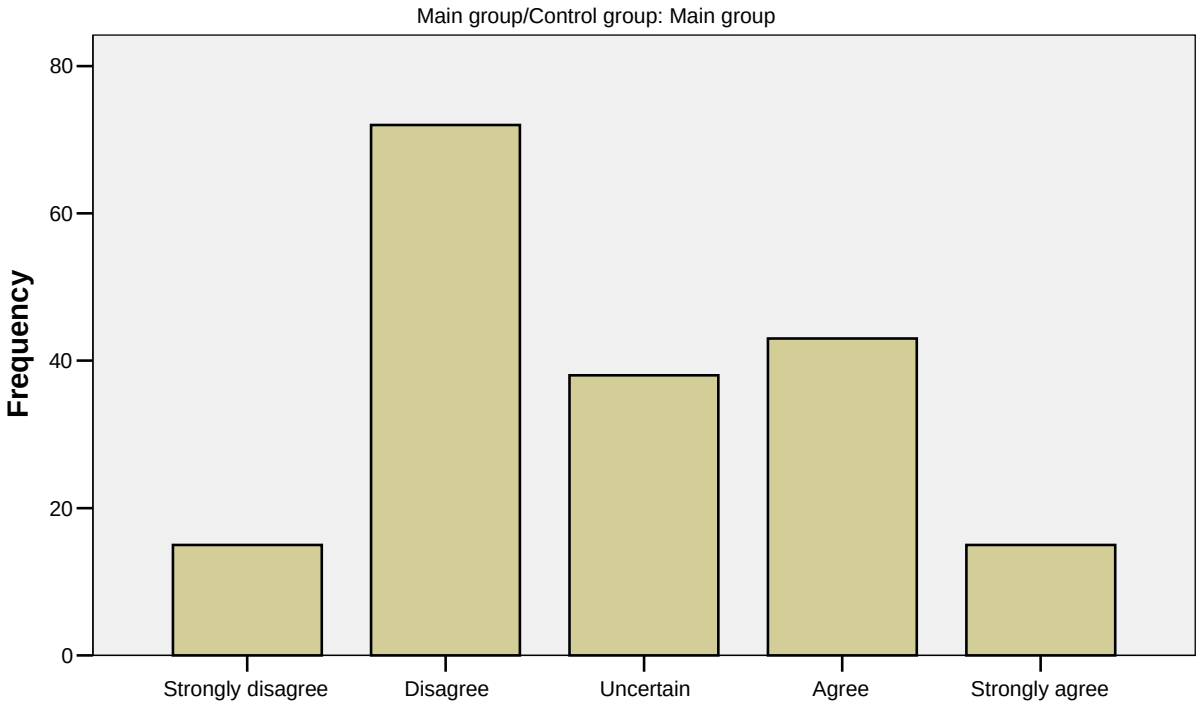
Contacts between students and teachers can have the same intensity in online education as in face-to-face education



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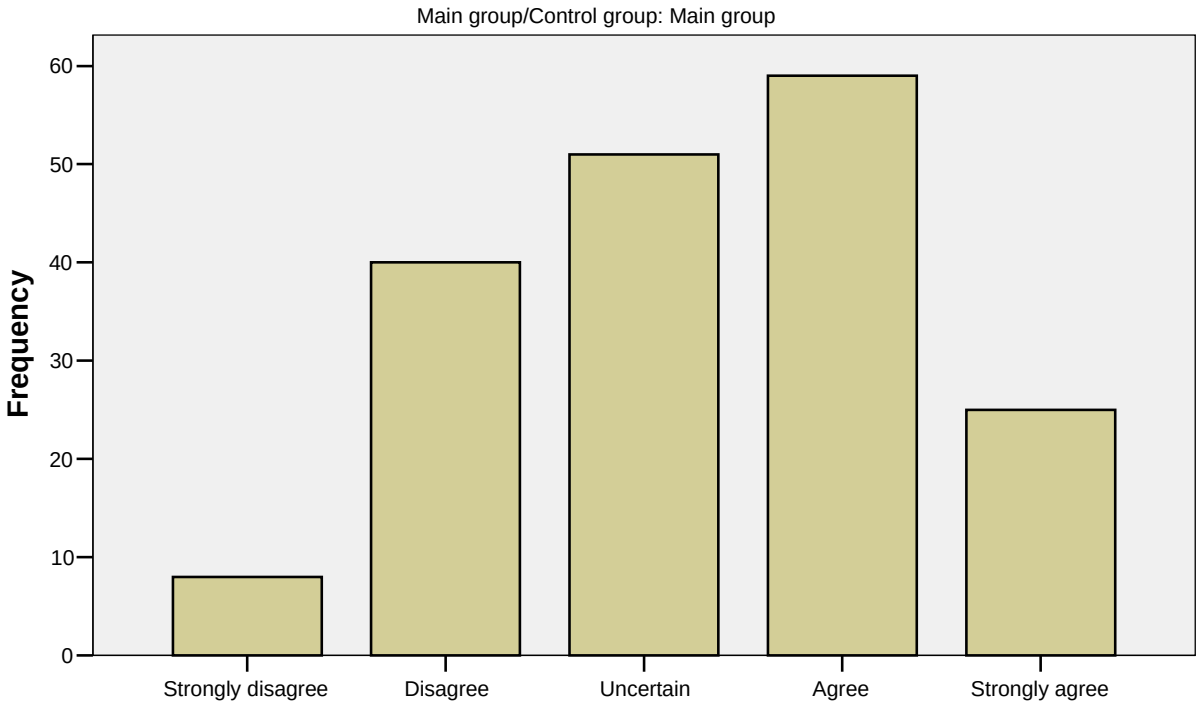
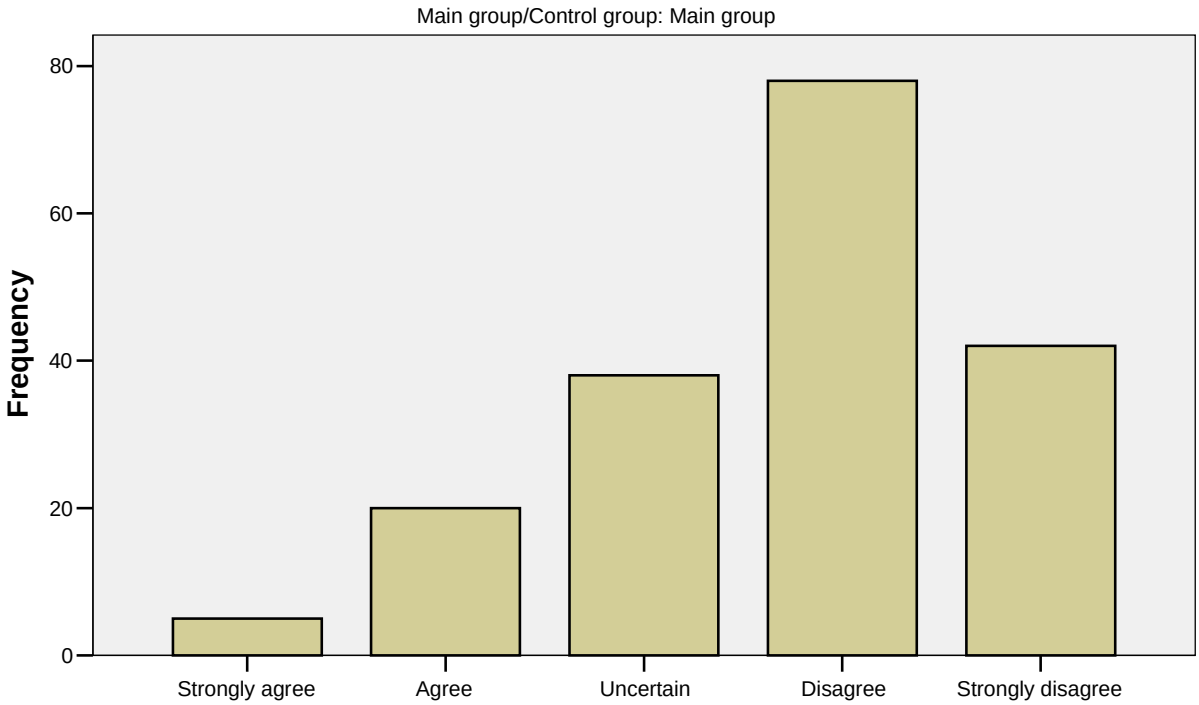
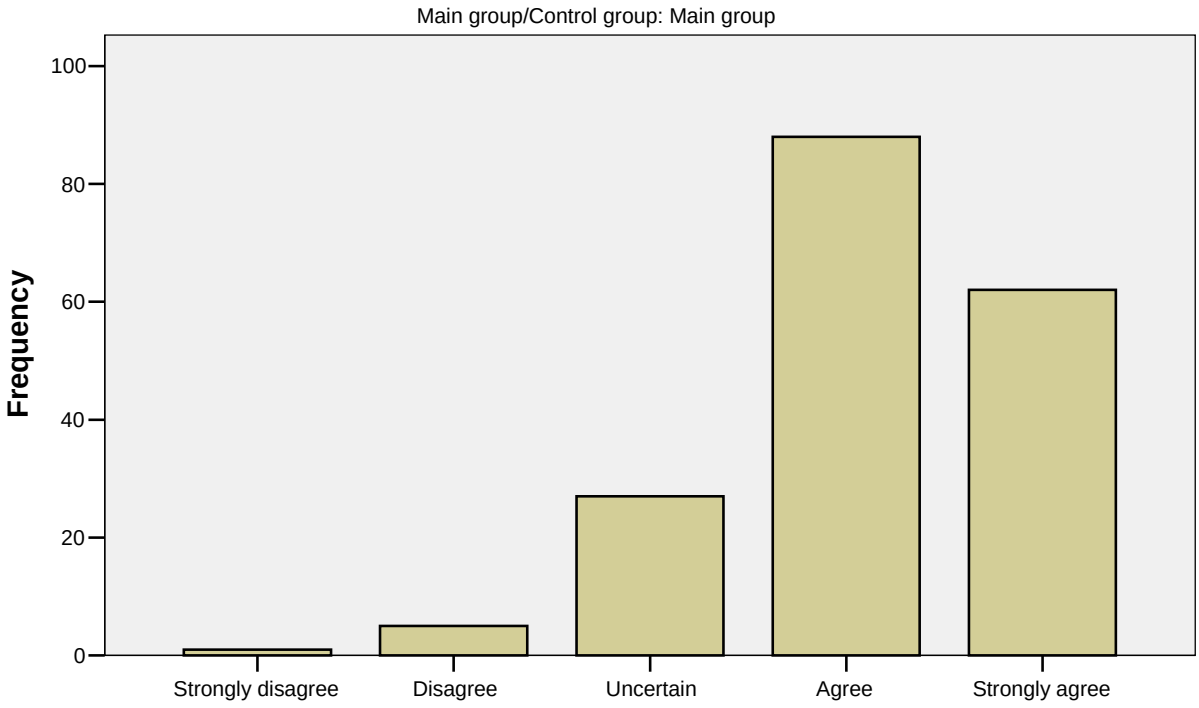


Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

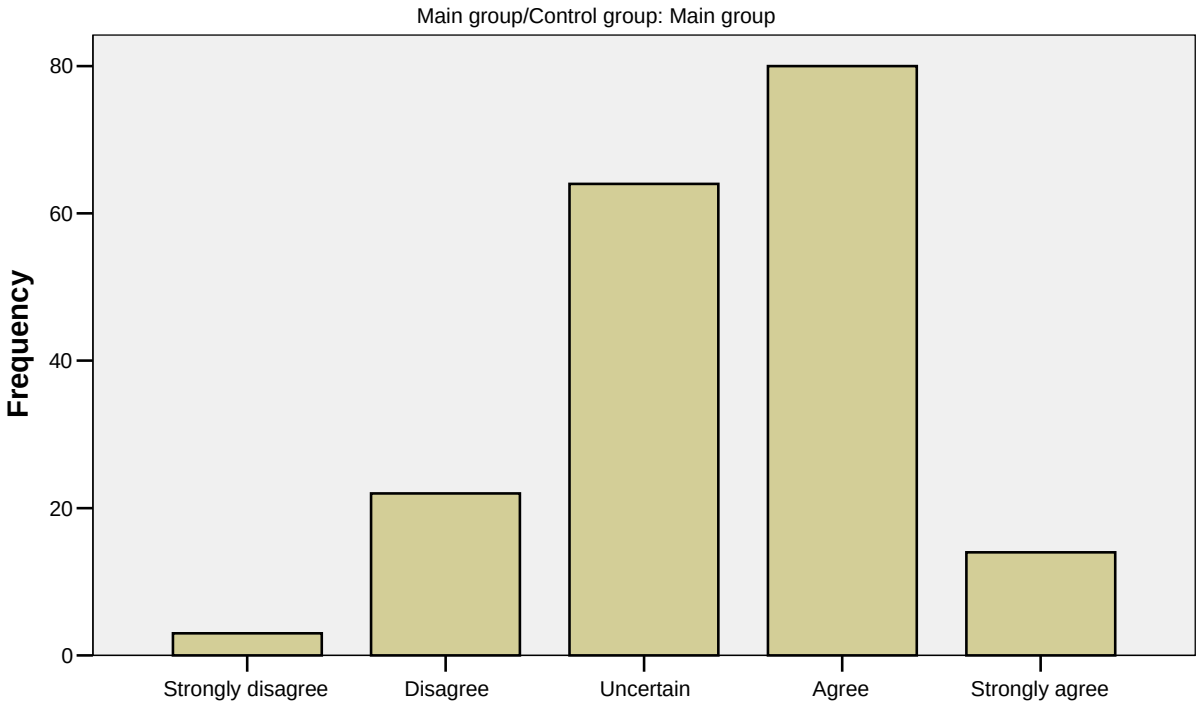
Only optimistic people think that the impact of technology on learning is beneficial



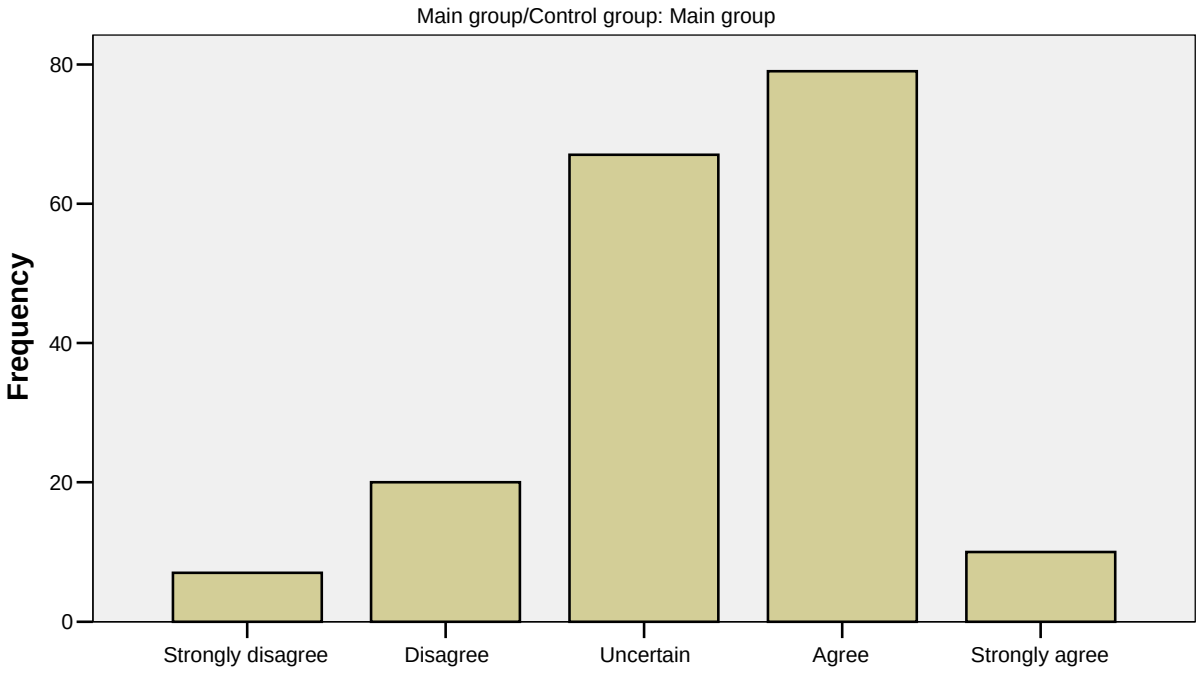
From my personal study experience I find that the impact of technology on learning is valuable



Information and communications technology has usually been used to encourage us to be active participants in learning

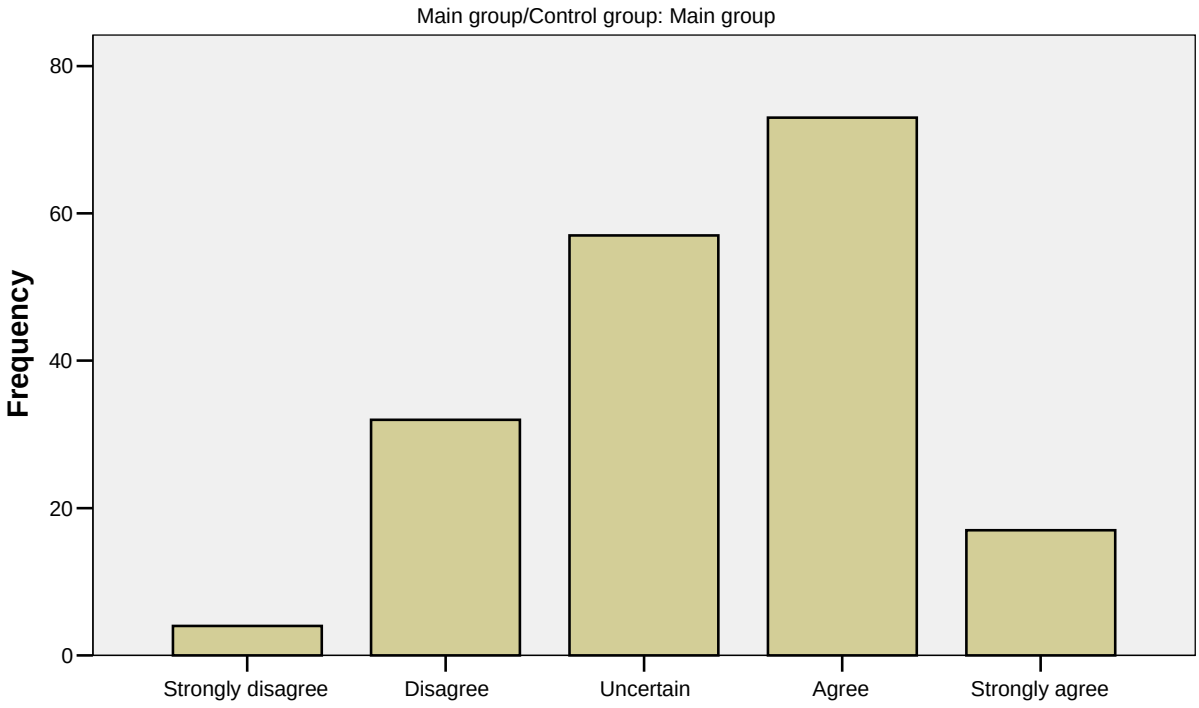


Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving



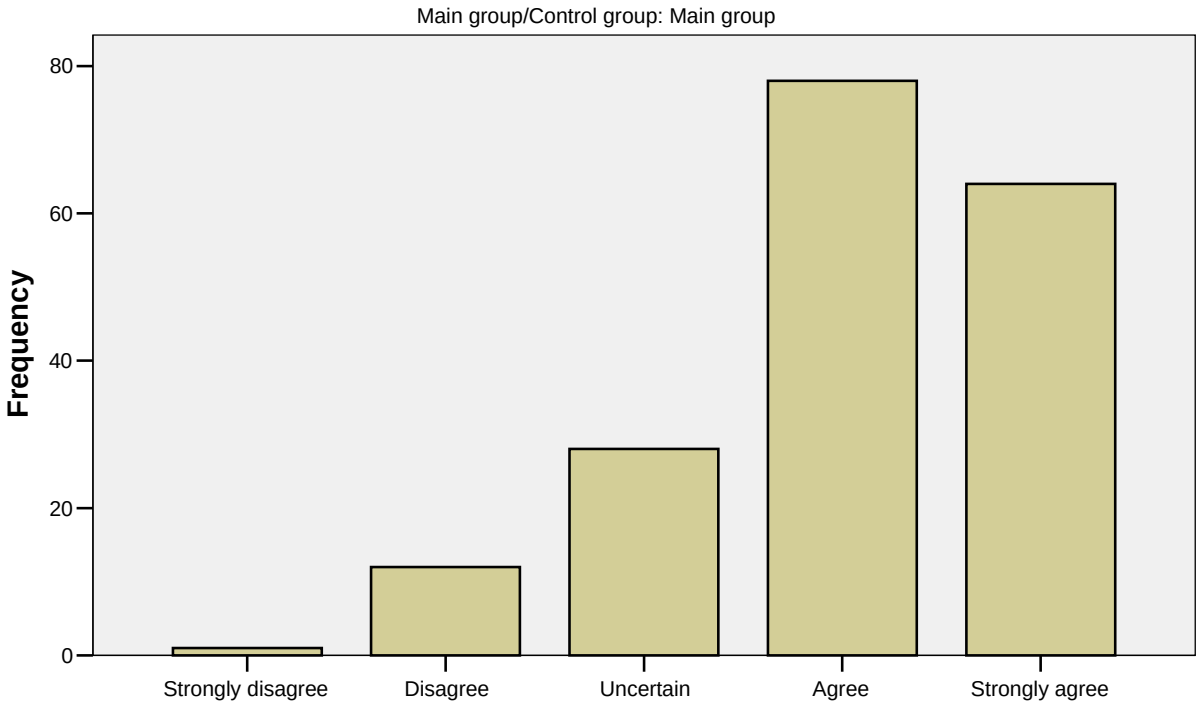
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

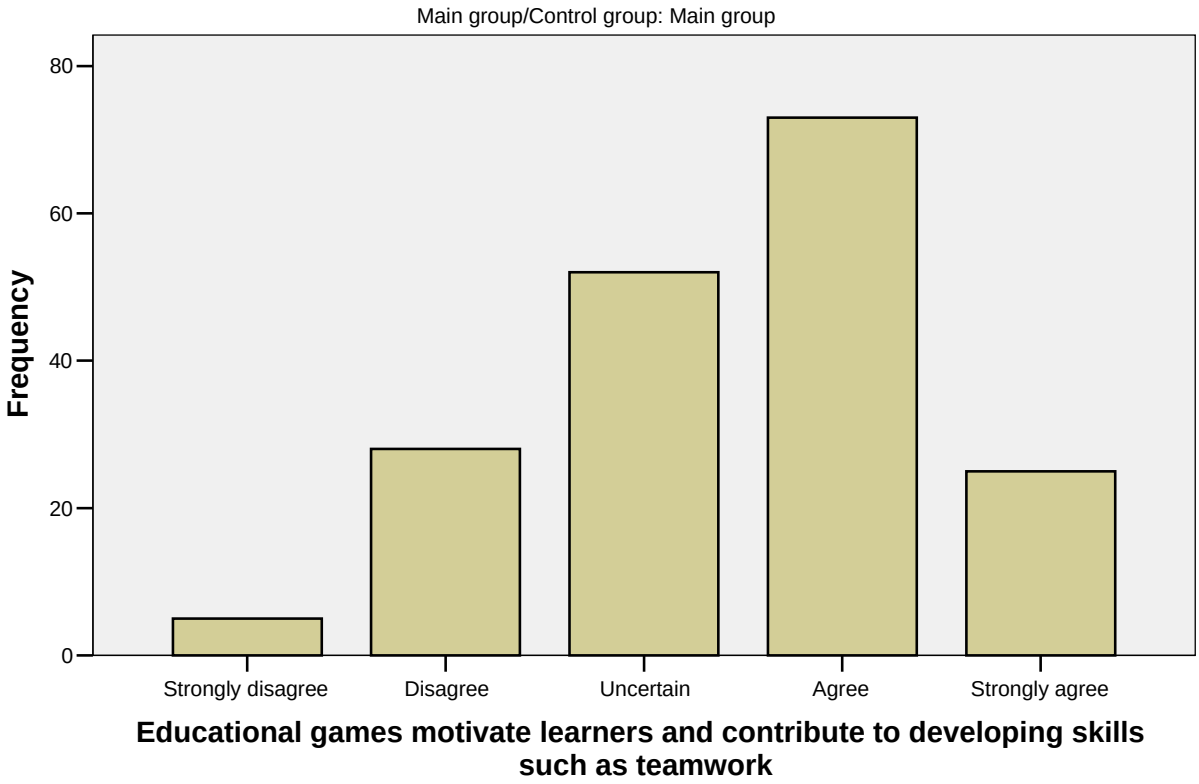


Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

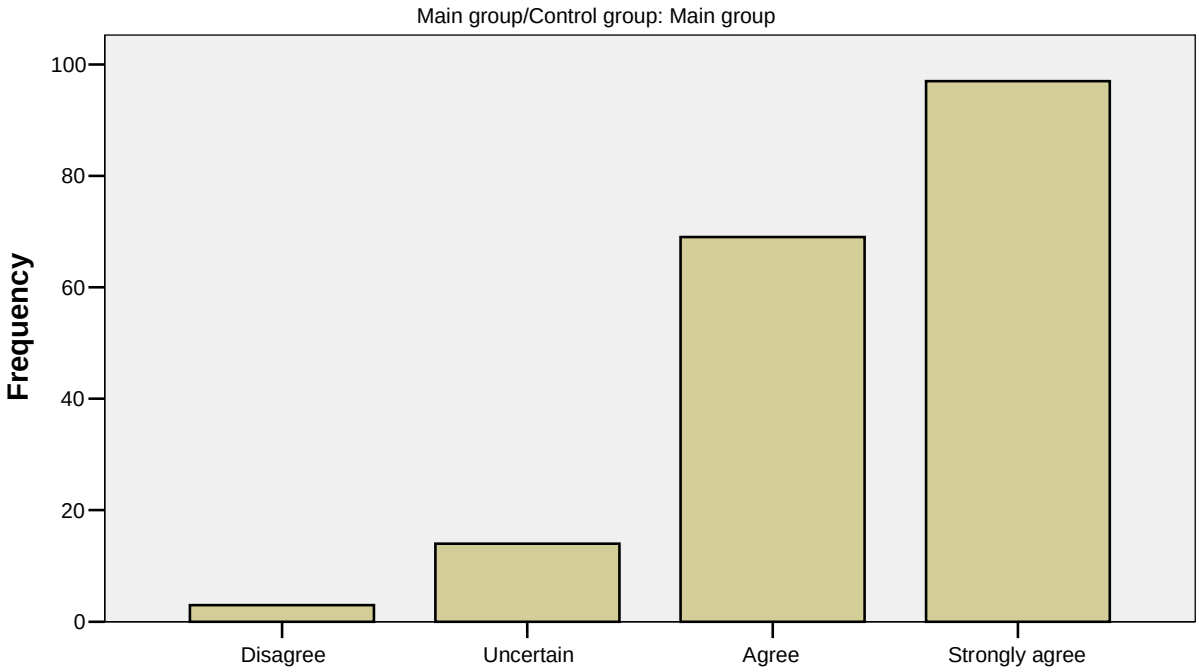
Learning is enhanced when text and pictures are integrated in a multimedia environment



Educational games motivate learners and contribute to developing skills such as teamwork

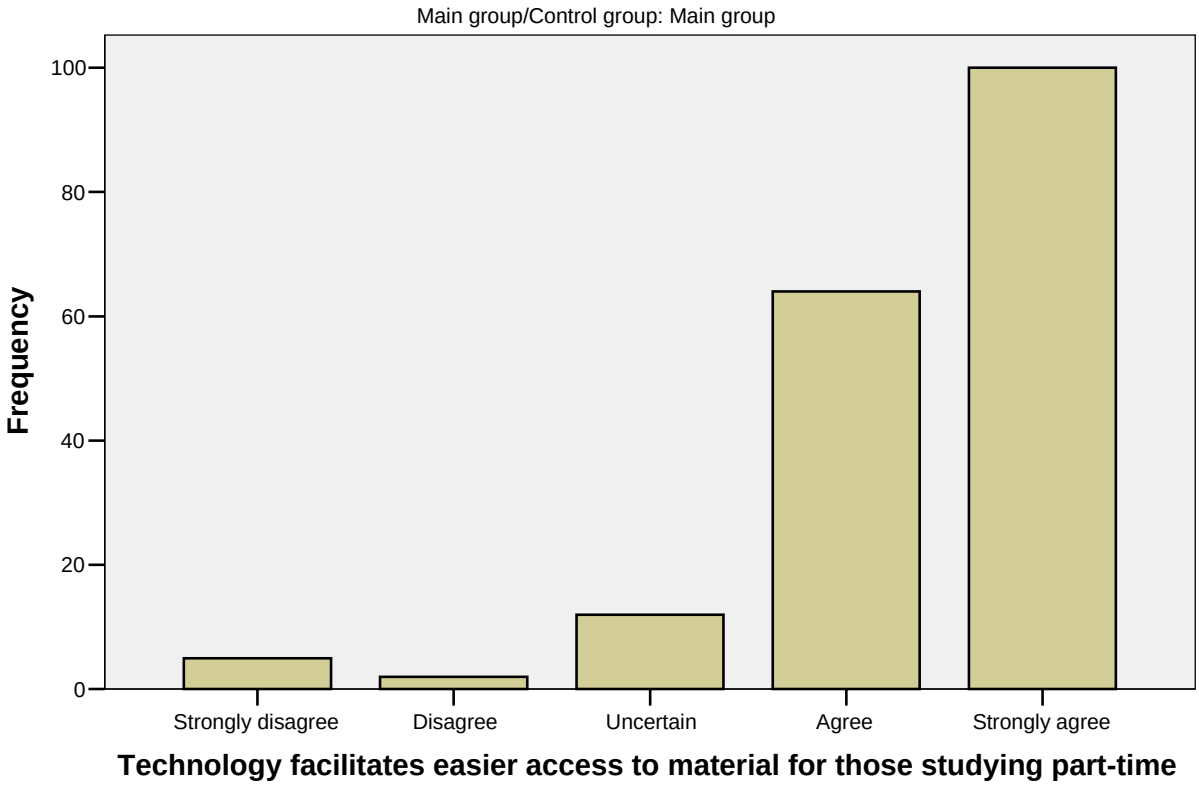


The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

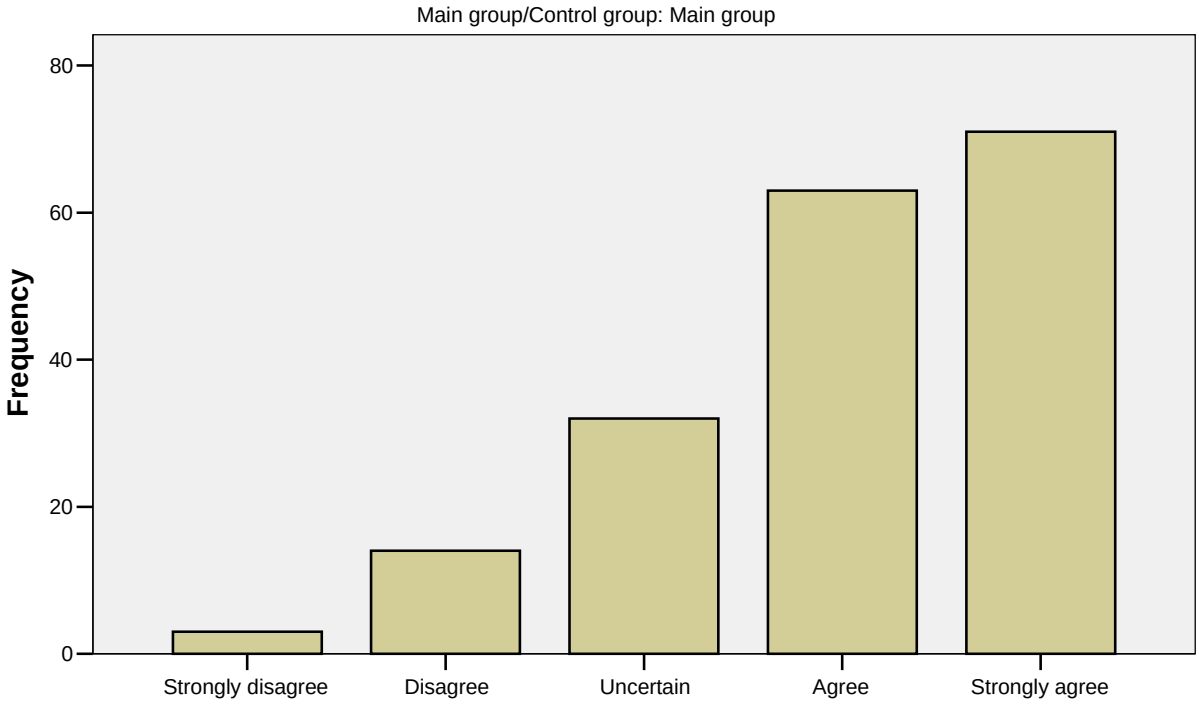


The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Technology facilitates easier access to material for those studying part-time

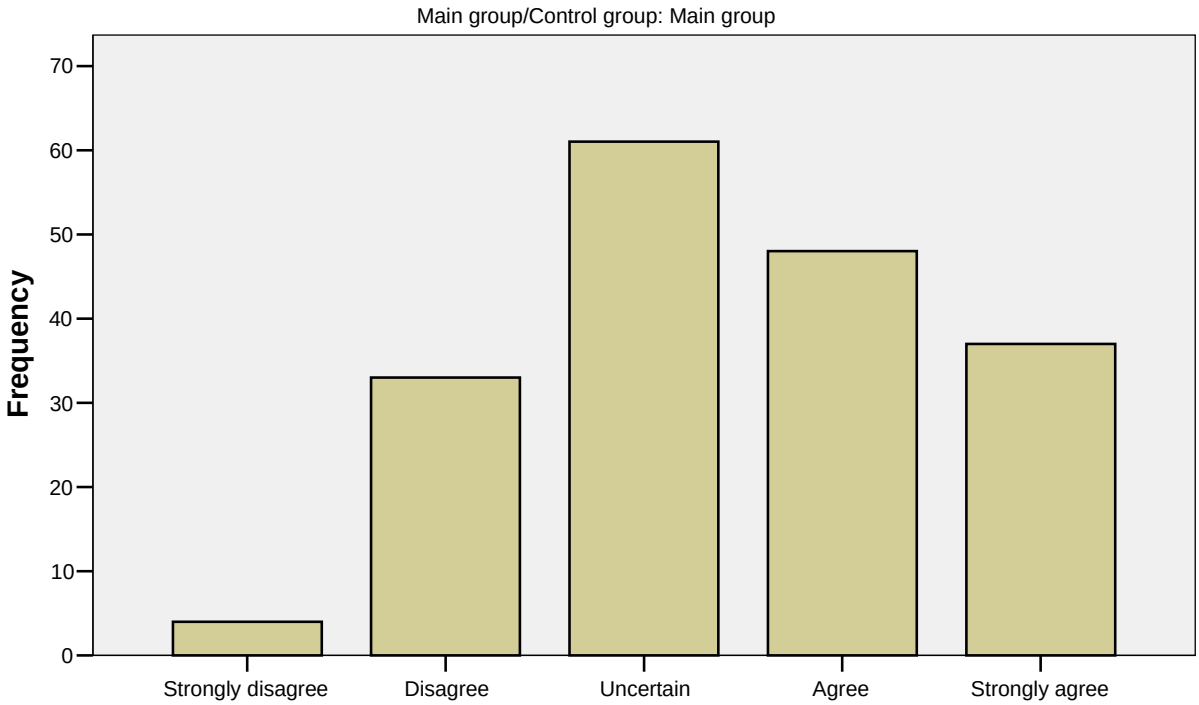


University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities



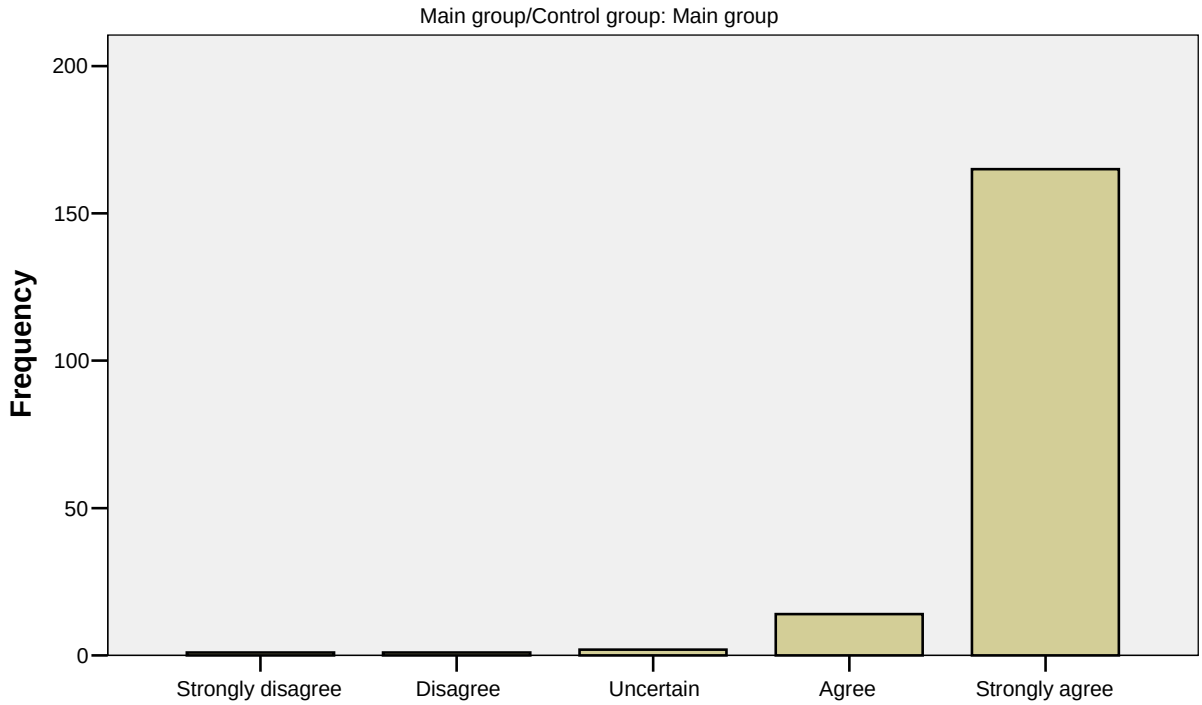
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university



There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Study at an Open University is especially of advantage to adults who have work and family obligations



Study at an Open University is especially of advantage to adults who have work and family obligations

Main group/Control group = Control group

Statistics[a]

		What is your occupation?	What is your age grouping?	Gender	What is your level of education?	To what extent have you used advanced technological equipment in your professional life?	Have you had to change your way of working because of technological developments?
N	Valid	1742	1760	1742	1733	1742	1724
	Missing						

Statistics[a]

		Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Only optimistic people think that the impact of technology on learning is beneficial	From my personal study experience I find that the impact of technology on learning is valuable
N	Valid	176	173	174	174	174
	Missing	0	3	2	2	2

Statistics[a]

		Information and communications technology has usually been used to encourage us to be active participants in learning	Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Learning is enhanced when text and pictures are integrated in a multimedia environment	Educational games motivate learners and contribute to developing skills such as teamwork
N	Valid	174	175	172	174	173
	Missing	2	1	4	2	3

Statistics[a]

		The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Technology facilitates easier access to material for those studying part-time	University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university
N	Valid	153	154	153	152
	Missing	23	22	23	24

Statistics[a]

		Study at an Open University is especially of advantage to adults who have work and family obligations	Main group/Control group
N	Valid	154	176
	Missing	22	0

a. Main group/Control group = Control group

Frequency Table

What is your occupation?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manager	30	17,0	17,2	17,2
	Technical	11	6,3	6,3	23,6
	Teacher or Trainer	66	37,5	37,9	61,5
	Student	59	33,5	33,9	95,4
	Unemployed	8	4,5	4,6	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

What is your age grouping?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24 or younger	43	24,4	24,4	24,4
	25-29	43	24,4	24,4	48,9
	30-40	39	22,2	22,2	71,0
	41-50	29	16,5	16,5	87,5
	over 50	22	12,5	12,5	100,0
	Total	176	100,0	100,0	

a. Main group/Control group = Control group

Gender[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	66	37,5	37,9	37,9
	Female	108	61,4	62,1	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

What is your level of education?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school matriculation	79	44,9	45,7	45,7
	One to three years of post-secondary education	37	21,0	21,4	67,1
	Four or more years of post-secondary education	57	32,4	32,9	100,0
	Total	173	98,3	100,0	
Missing	0	3	1,7		
Total		176	100,0		

a. Main group/Control group = Control group

To what extent have you used advanced technological equipment in your professional life?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A lot	70	39,8	40,2	40,2
	Quite a bit	68	38,6	39,1	79,3
	Little	24	13,6	13,8	93,1
	very little	8	4,5	4,6	97,7
	not at all	4	2,3	2,3	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

Have you had to change your way of working because of technological developments?[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, more than once	100	56,8	58,1	58,1
	Yes. Once	17	9,7	9,9	68,0
	No	55	31,3	32,0	100,0
	Total	172	97,7	100,0	
Missing	0	4	2,3		
Total		176	100,0		

a. Main group/Control group = Control group

Thanks to technology, the problems of access to learning for students with disabilities have been resolved[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	2,3	2,3	2,3
	Disagree	24	13,6	13,6	15,9
	Uncertain	62	35,2	35,2	51,1
	Agree	68	38,6	38,6	89,8
	Strongly agree	18	10,2	10,2	100,0
	Total	176	100,0	100,0	

a. Main group/Control group = Control group

Contacts between students and teachers can have the same intensity in online education as in face-to-face education[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	33	18,8	19,1	19,1
	Disagree	84	47,7	48,6	67,6
	Uncertain	19	10,8	11,0	78,6
	Agree	33	18,8	19,1	97,7
	Strongly agree	4	2,3	2,3	100,0
	Total	173	98,3	100,0	
Missing	0	3	1,7		
Total		176	100,0		

a. Main group/Control group = Control group

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	5,1	5,2	5,2
	Disagree	49	27,8	28,2	33,3
	Uncertain	27	15,3	15,5	48,9
	Agree	73	41,5	42,0	90,8
	Strongly agree	16	9,1	9,2	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

Only optimistic people think that the impact of technology on learning is beneficial[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	5	2,8	2,9	2,9
	Agree	32	18,2	18,4	21,3
	Uncertain	36	20,5	20,7	42,0
	Disagree	91	51,7	52,3	94,3
	Strongly disagree	10	5,7	5,7	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

From my personal study experience I find that the impact of technology on learning is valuable[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	1,1	1,1	1,1
	Disagree	8	4,5	4,6	5,7
	Uncertain	16	9,1	9,2	14,9
	Agree	92	52,3	52,9	67,8
	Strongly agree	56	31,8	32,2	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

Information and communications technology has usually been used to encourage us to be active participants in learning[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	1,1	1,1	1,1
	Disagree	26	14,8	14,9	16,1
	Uncertain	50	28,4	28,7	44,8
	Agree	79	44,9	45,4	90,2
	Strongly agree	17	9,7	9,8	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	2,3	2,3	2,3
	Disagree	27	15,3	15,4	17,7
	Uncertain	50	28,4	28,6	46,3
	Agree	80	45,5	45,7	92,0
	Strongly agree	14	8,0	8,0	100,0
	Total	175	99,4	100,0	
Missing	0	1	,6		
Total		176	100,0		

a. Main group/Control group = Control group

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	1,7	1,7	1,7
	Disagree	22	12,5	12,8	14,5
	Uncertain	36	20,5	20,9	35,5
	Agree	82	46,6	47,7	83,1
	Strongly agree	29	16,5	16,9	100,0
	Total	172	97,7	100,0	
Missing	0	4	2,3		
Total		176	100,0		

a. Main group/Control group = Control group

Learning is enhanced when text and pictures are integrated in a multimedia environment[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	,6	,6	,6
	Disagree	4	2,3	2,3	2,9
	Uncertain	14	8,0	8,0	10,9
	Agree	98	55,7	56,3	67,2
	Strongly agree	57	32,4	32,8	100,0
	Total	174	98,9	100,0	
Missing	0	2	1,1		
Total		176	100,0		

a. Main group/Control group = Control group

Educational games motivate learners and contribute to developing skills such as teamwork[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	2,3	2,3	2,3
	Disagree	8	4,5	4,6	6,9
	Uncertain	22	12,5	12,7	19,7
	Agree	79	44,9	45,7	65,3
	Strongly agree	60	34,1	34,7	100,0
	Total	173	98,3	100,0	
Missing	0	3	1,7		
Total		176	100,0		

a. Main group/Control group = Control group

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	1,1	1,3	1,3
	Disagree	8	4,5	5,2	6,5
	Uncertain	28	15,9	18,3	24,8
	Agree	56	31,8	36,6	61,4
	Strongly agree	59	33,5	38,6	100,0
	Total	153	86,9	100,0	
Missing	0	23	13,1		
Total		176	100,0		

a. Main group/Control group = Control group

Technology facilitates easier access to material for those studying part-time[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	1,7	1,9	1,9
	Uncertain	9	5,1	5,8	7,8
	Agree	45	25,6	29,2	37,0
	Strongly agree	97	55,1	63,0	100,0
	Total	154	87,5	100,0	
Missing	0	22	12,5		
Total		176	100,0		

a. Main group/Control group = Control group

University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	16	9,1	10,5	10,5
	Disagree	31	17,6	20,3	30,7
	Uncertain	65	36,9	42,5	73,2
	Agree	24	13,6	15,7	88,9
	Strongly agree	17	9,7	11,1	100,0
	Total	153	86,9	100,0	
Missing	0	23	13,1		
Total		176	100,0		

a. Main group/Control group = Control group

There is no difference in learning outcomes between studying at an Open University[a] or at a traditional face-to-face university

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	18	10,2	11,8	11,8
	Disagree	38	21,6	25,0	36,8
	Uncertain	64	36,4	42,1	78,9
	Agree	25	14,2	16,4	95,4
	Strongly agree	7	4,0	4,6	100,0
	Total	152	86,4	100,0	
Missing	0	24	13,6		
Total		176	100,0		

a. Main group/Control group = Control group

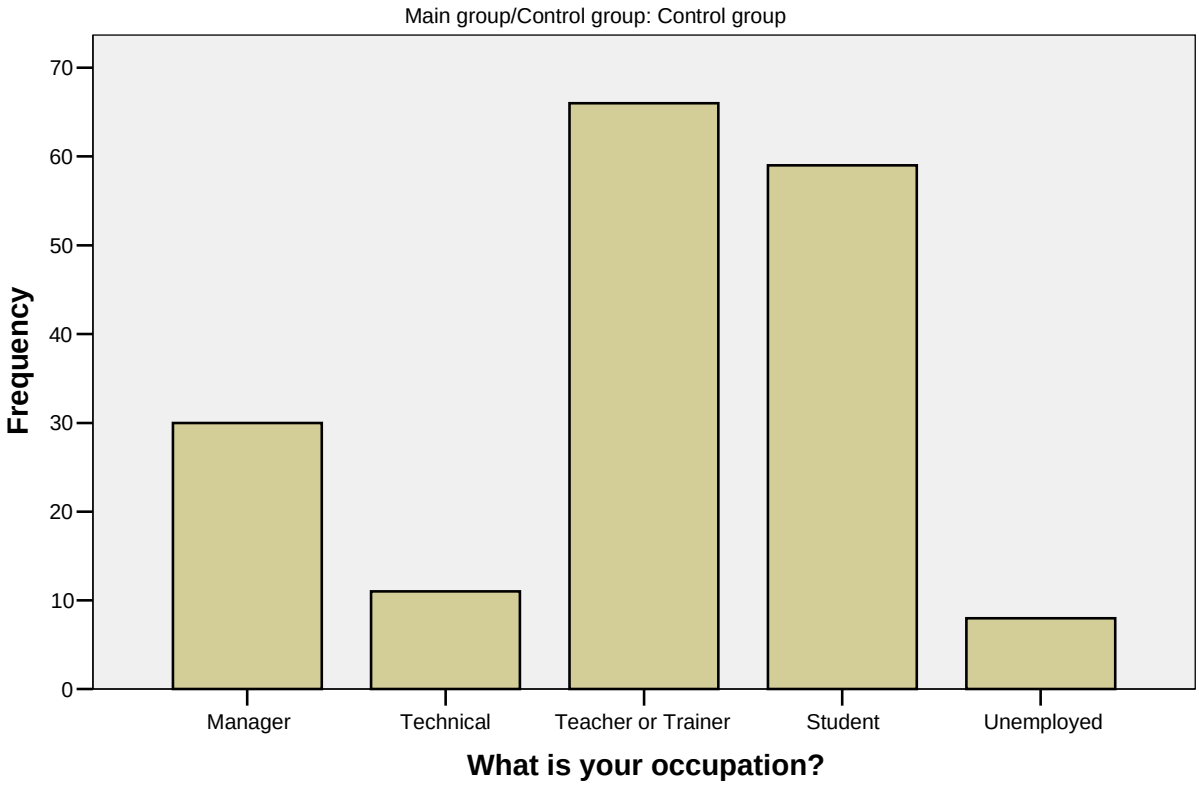
Study at an Open University is especially of advantage to adults who have work and family obligations[a]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	2,3	2,6	2,6
	Disagree	4	2,3	2,6	5,2
	Uncertain	8	4,5	5,2	10,4
	Agree	43	24,4	27,9	38,3
	Strongly agree	95	54,0	61,7	100,0
	Total	154	87,5	100,0	
Missing	0	22	12,5		
Total		176	100,0		

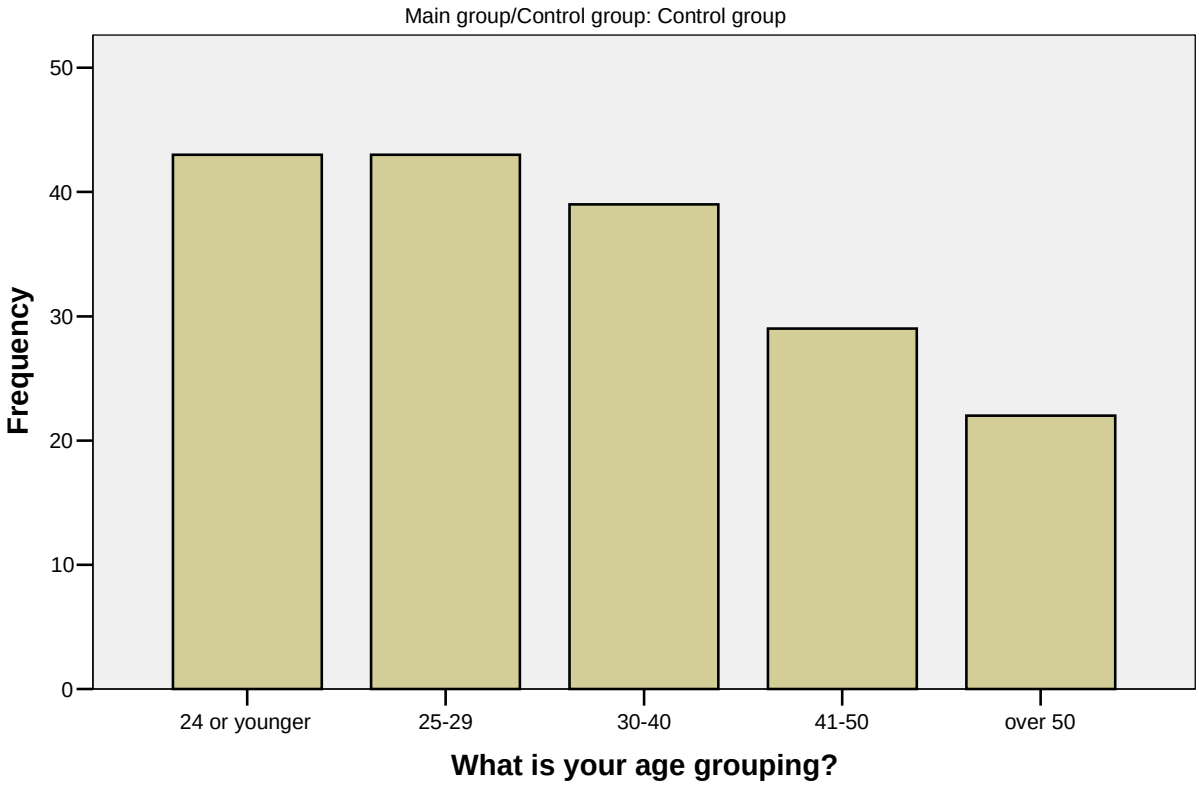
a. Main group/Control group = Control group

Bar Chart

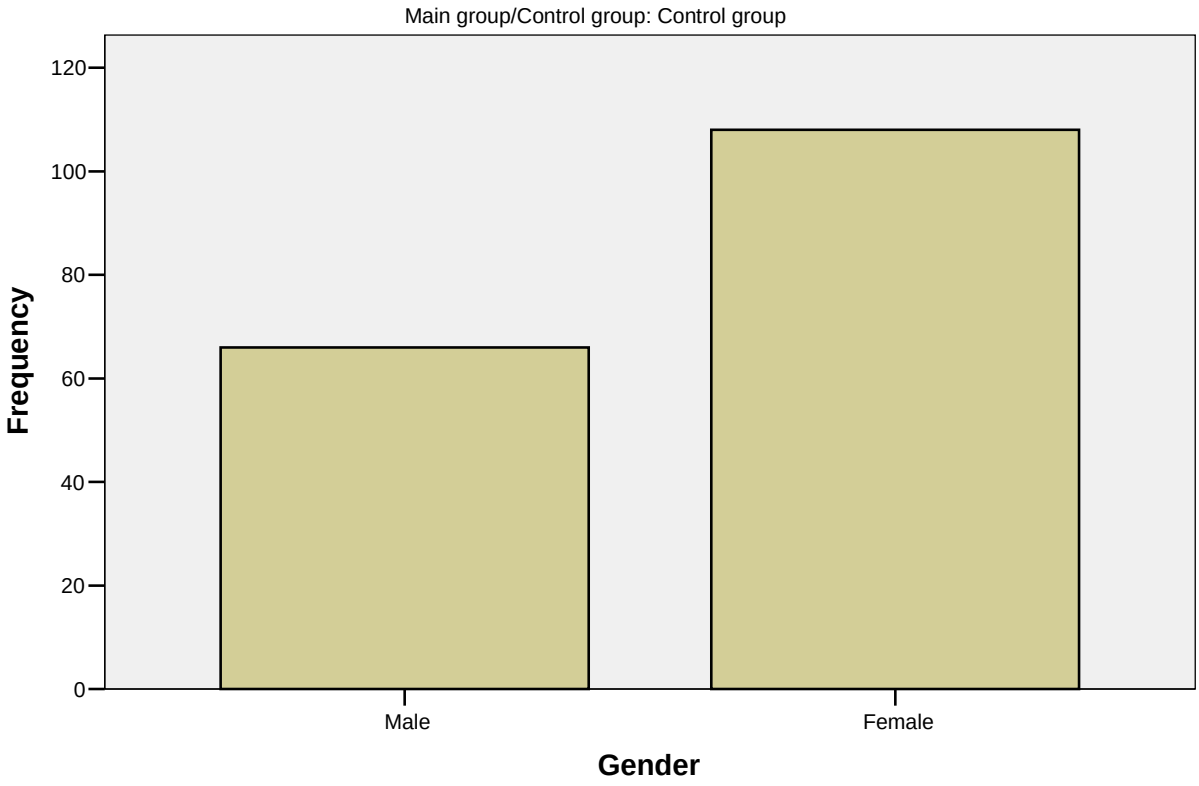
What is your occupation?



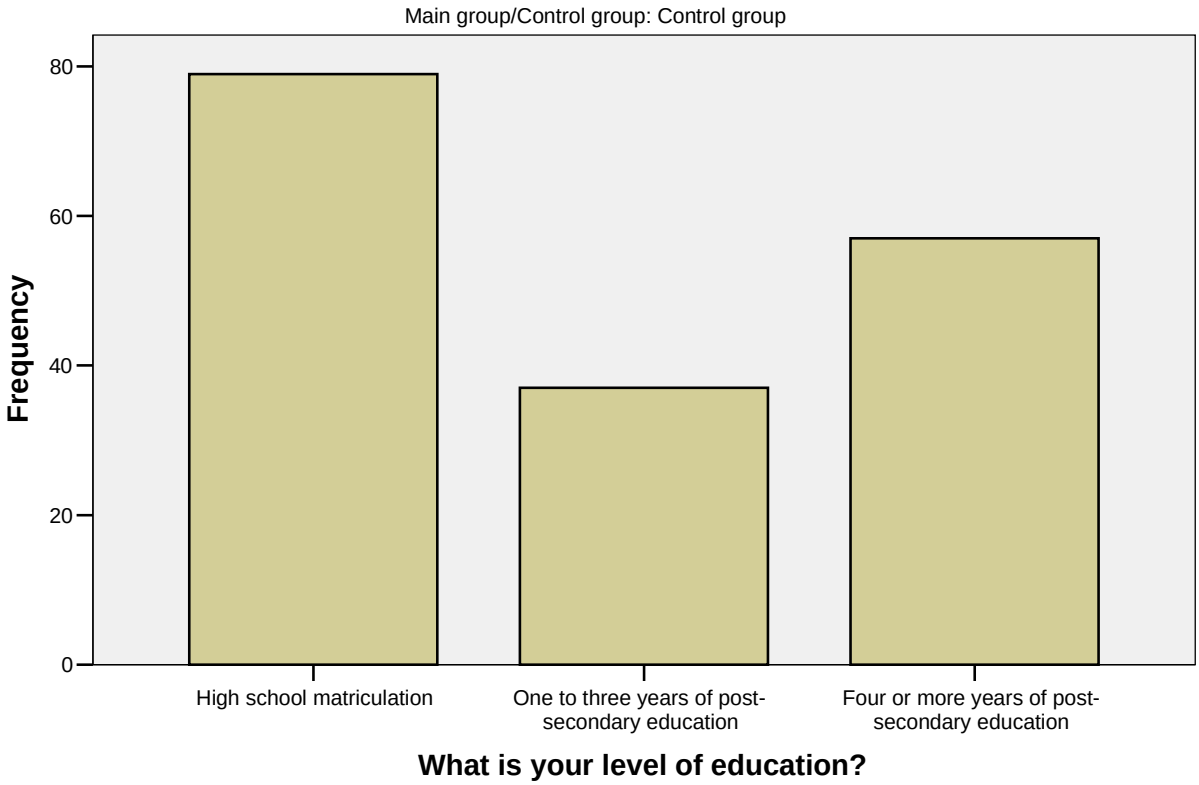
What is your age grouping?



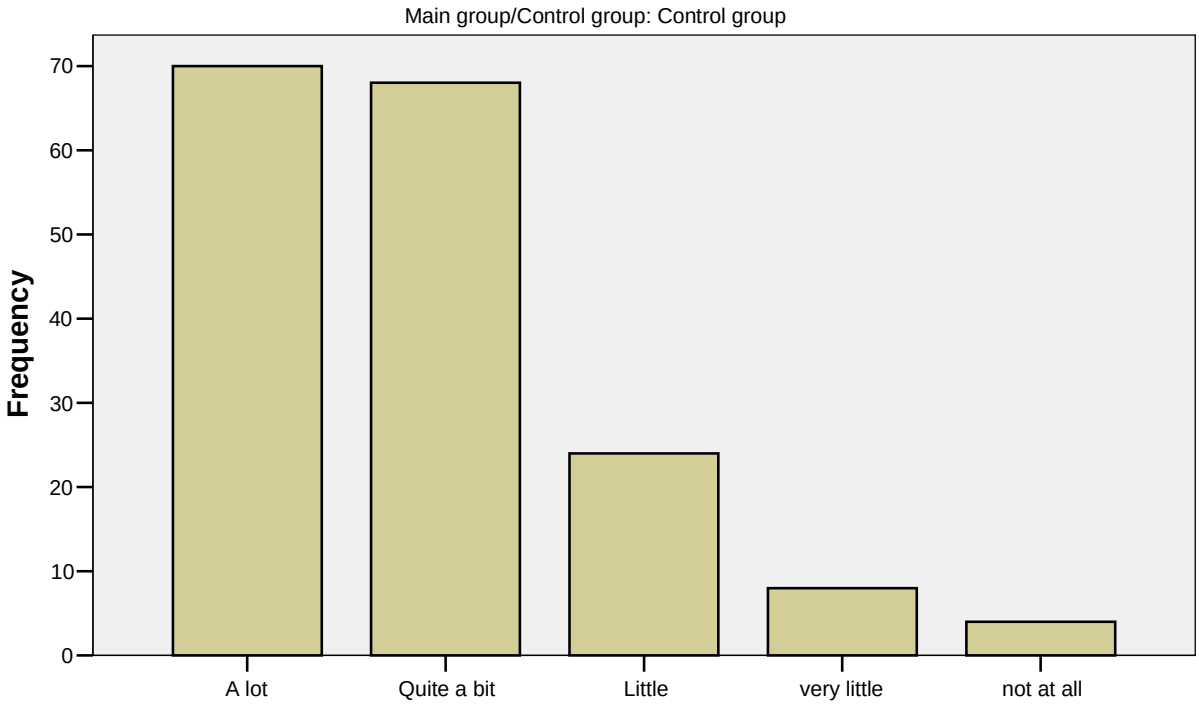
Gender


Main group/Control group: Control group
120
100
80
60
40
20
0
Frequency
Male
Female
Gender

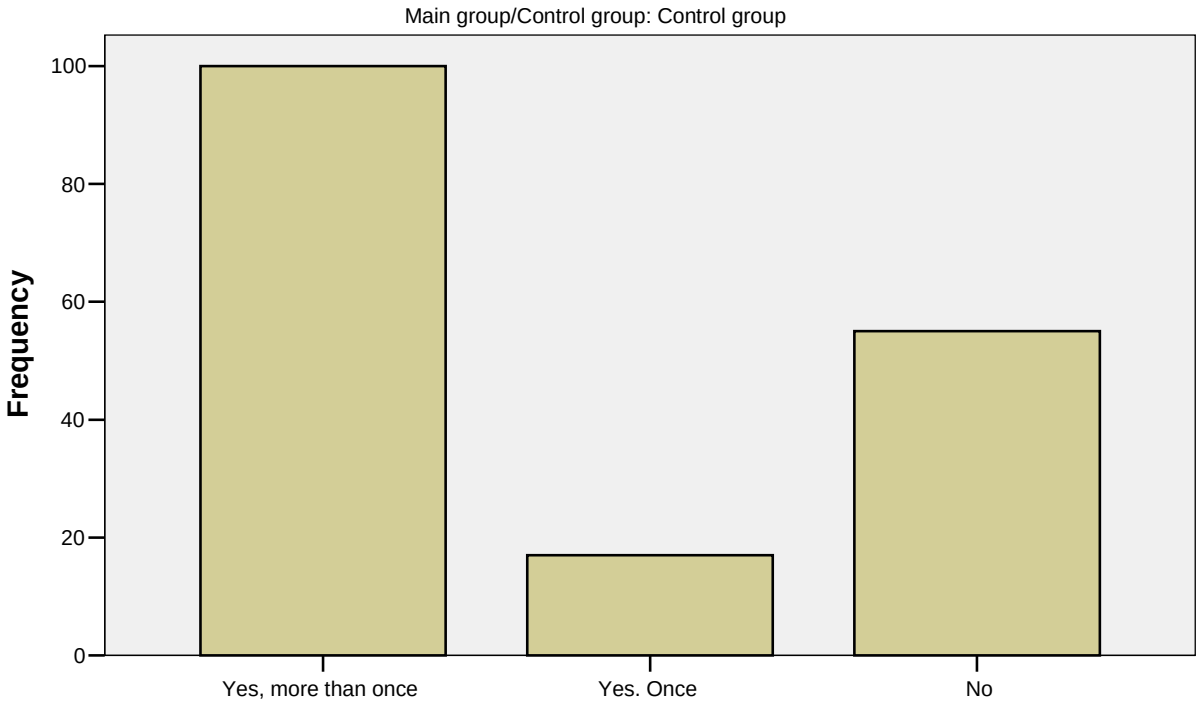
What is your level of education?



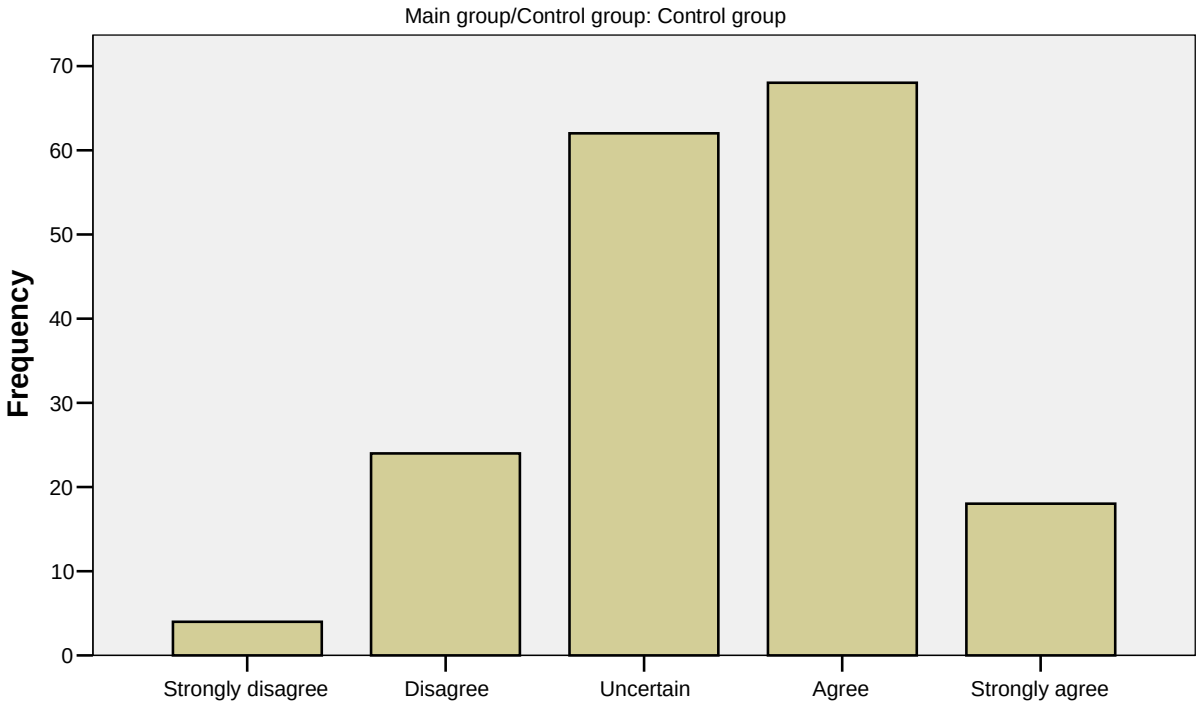
To what extent have you used advanced technological equipment in your professional life?



Have you had to change your way of working because of technological developments?

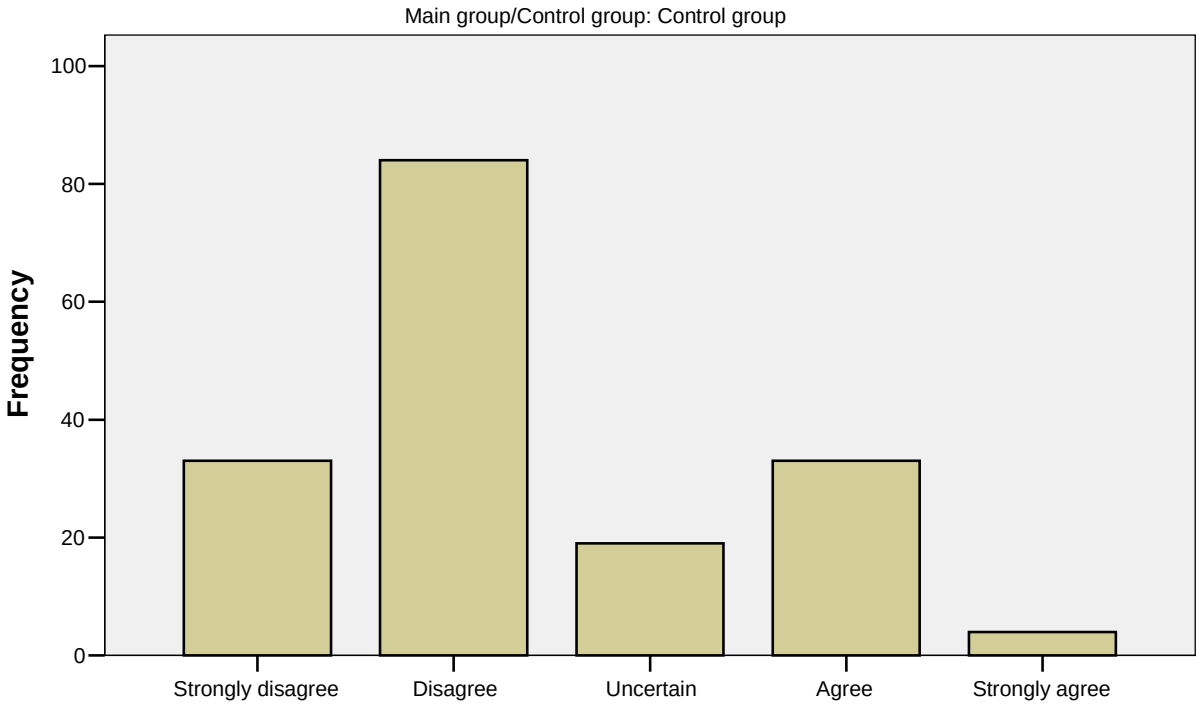


Thanks to technology, the problems of access to learning for students with disabilities have been resolved

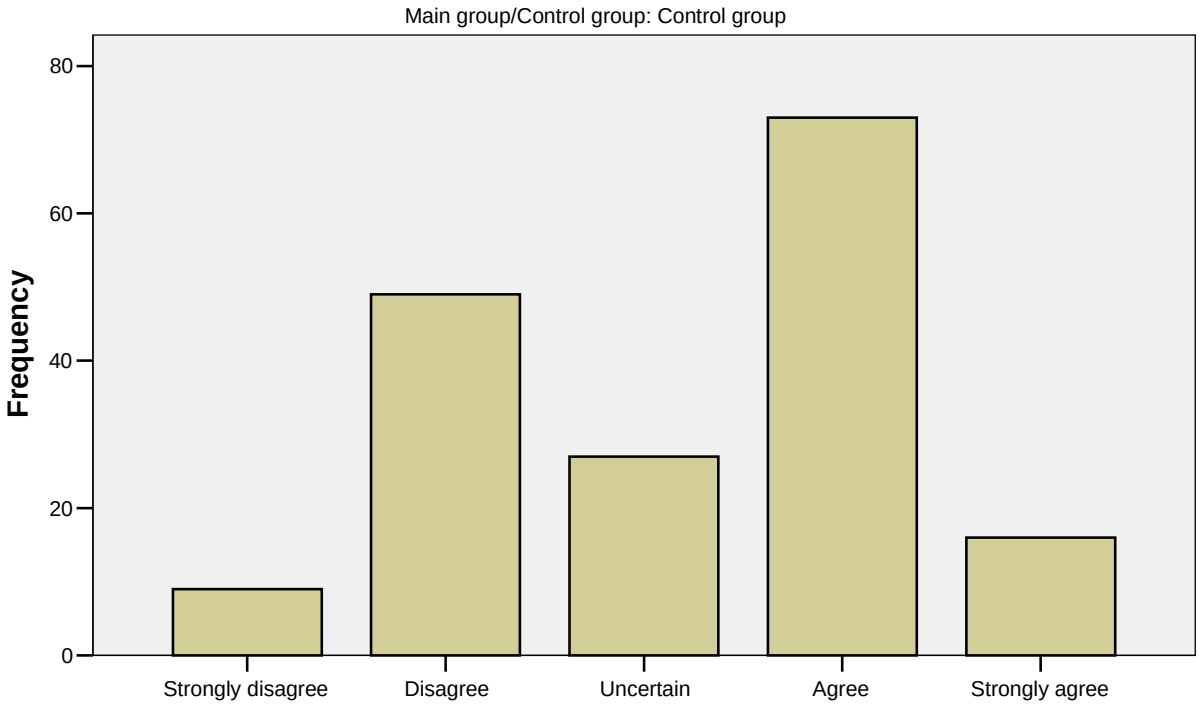


Thanks to technology, the problems of access to learning for students with disabilities have been resolved

Contacts between students and teachers can have the same intensity in online education as in face-to-face education

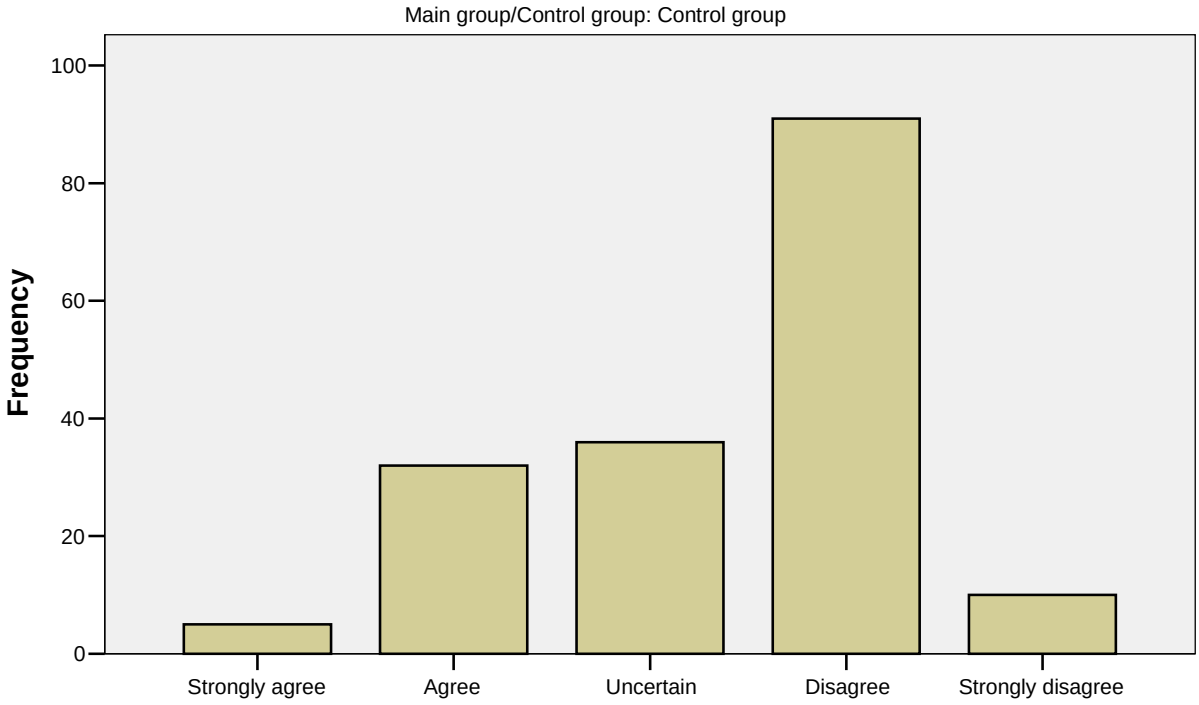


Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

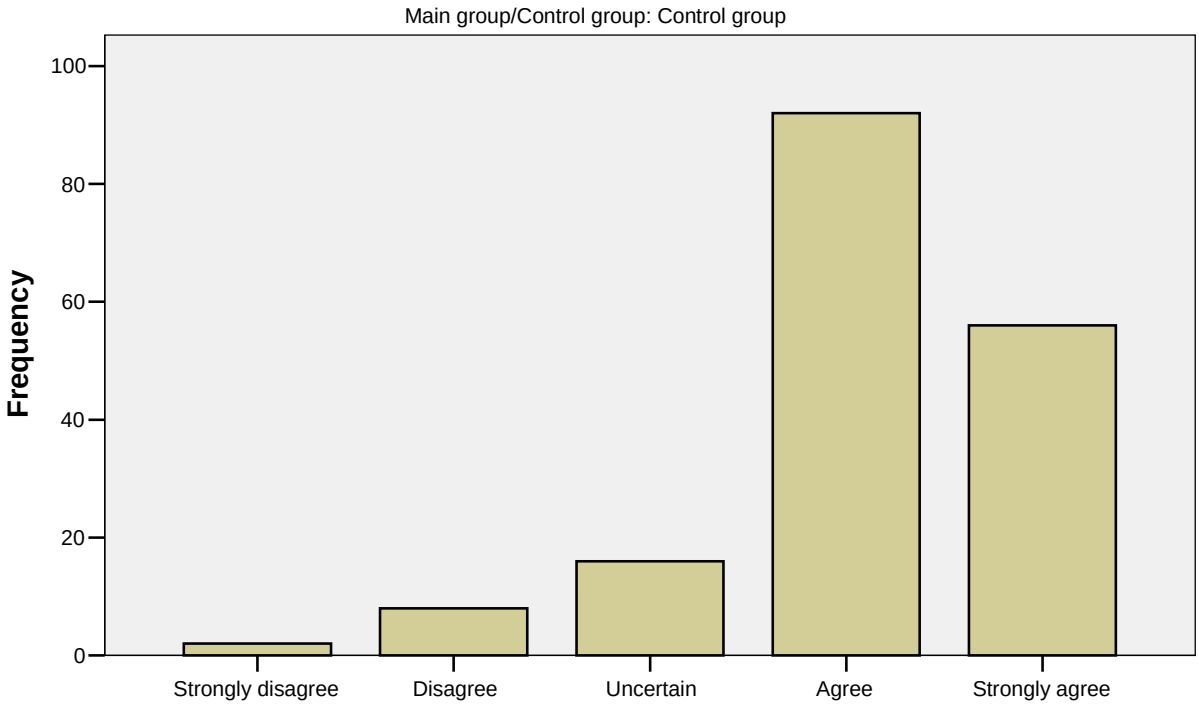


Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

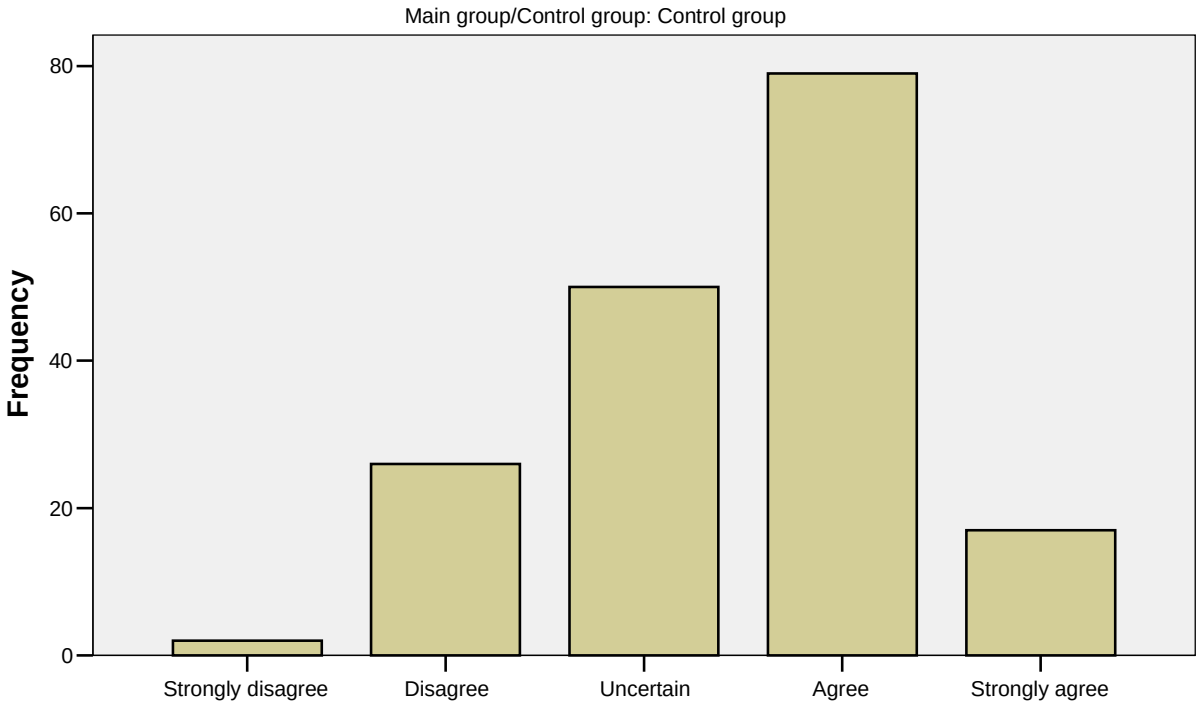
Only optimistic people think that the impact of technology on learning is beneficial



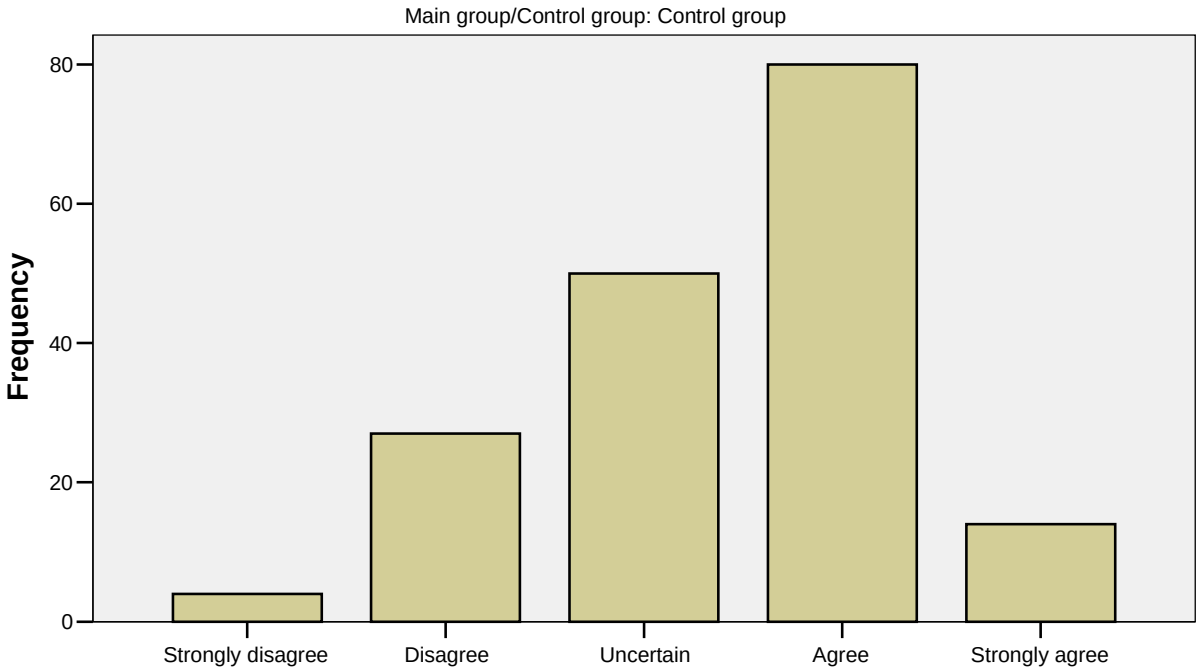
From my personal study experience I find that the impact of technology on learning is valuable



Information and communications technology has usually been used to encourage us to be active participants in learning

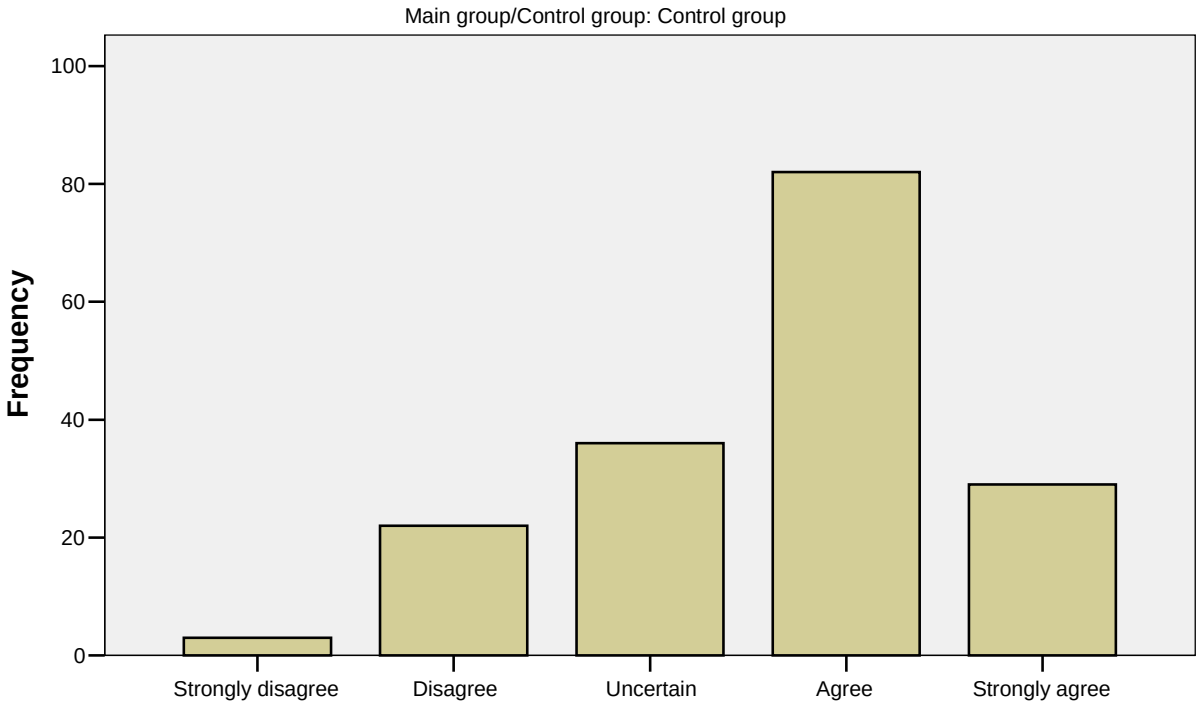


Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

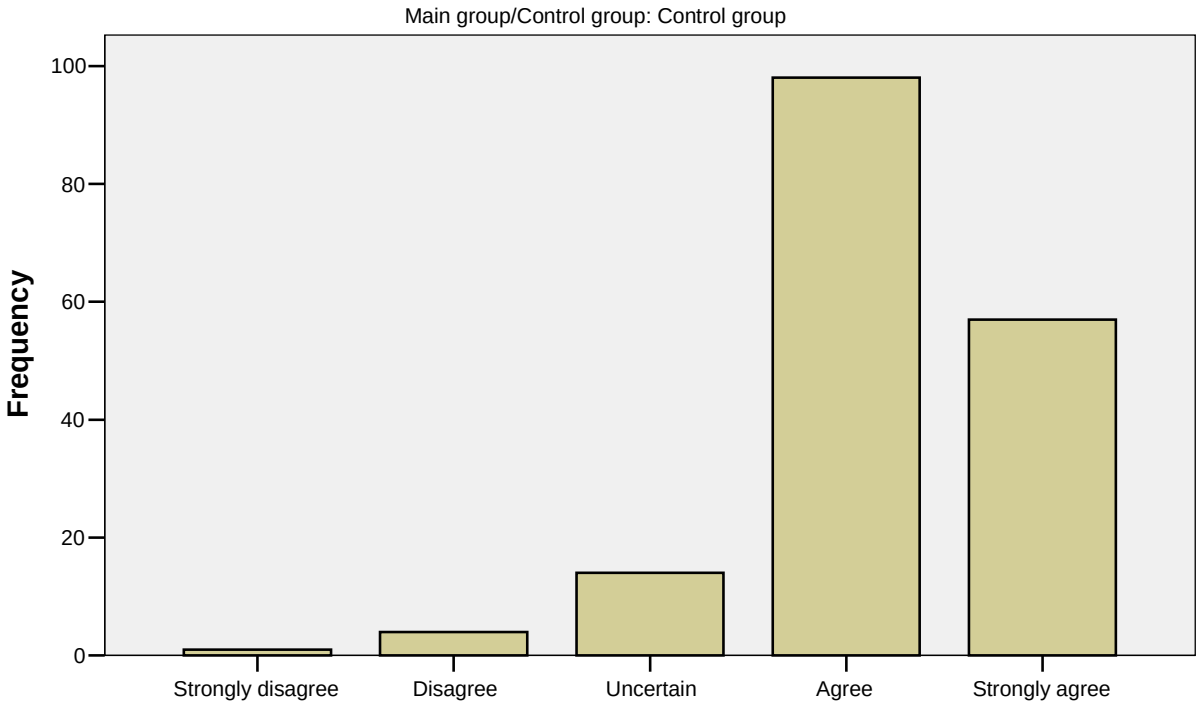


Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

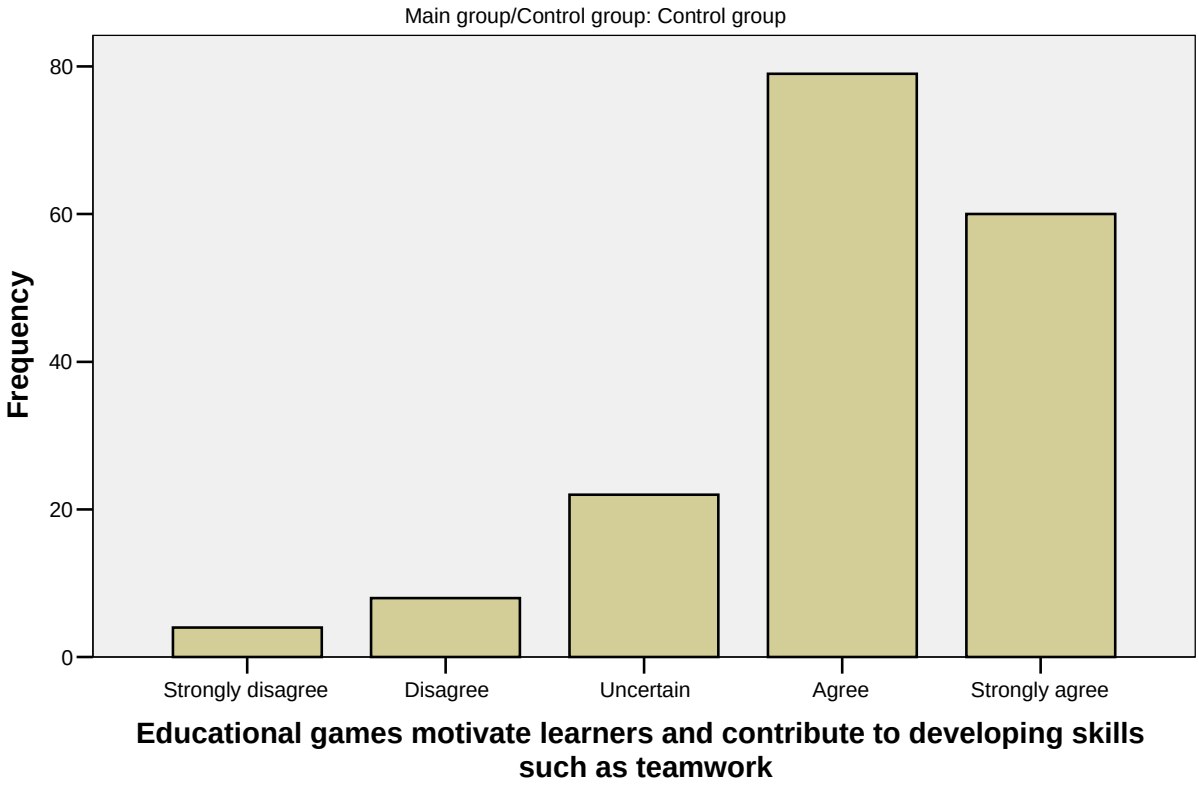
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs



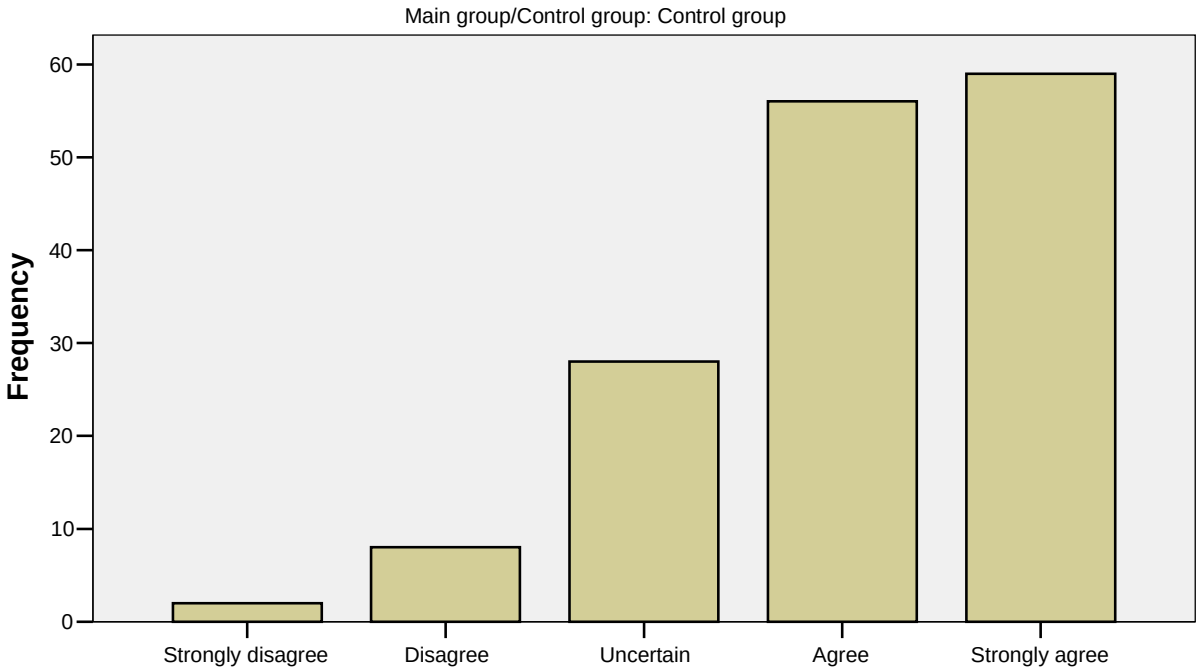
Learning is enhanced when text and pictures are integrated in a multimedia environment



Educational games motivate learners and contribute to developing skills such as teamwork

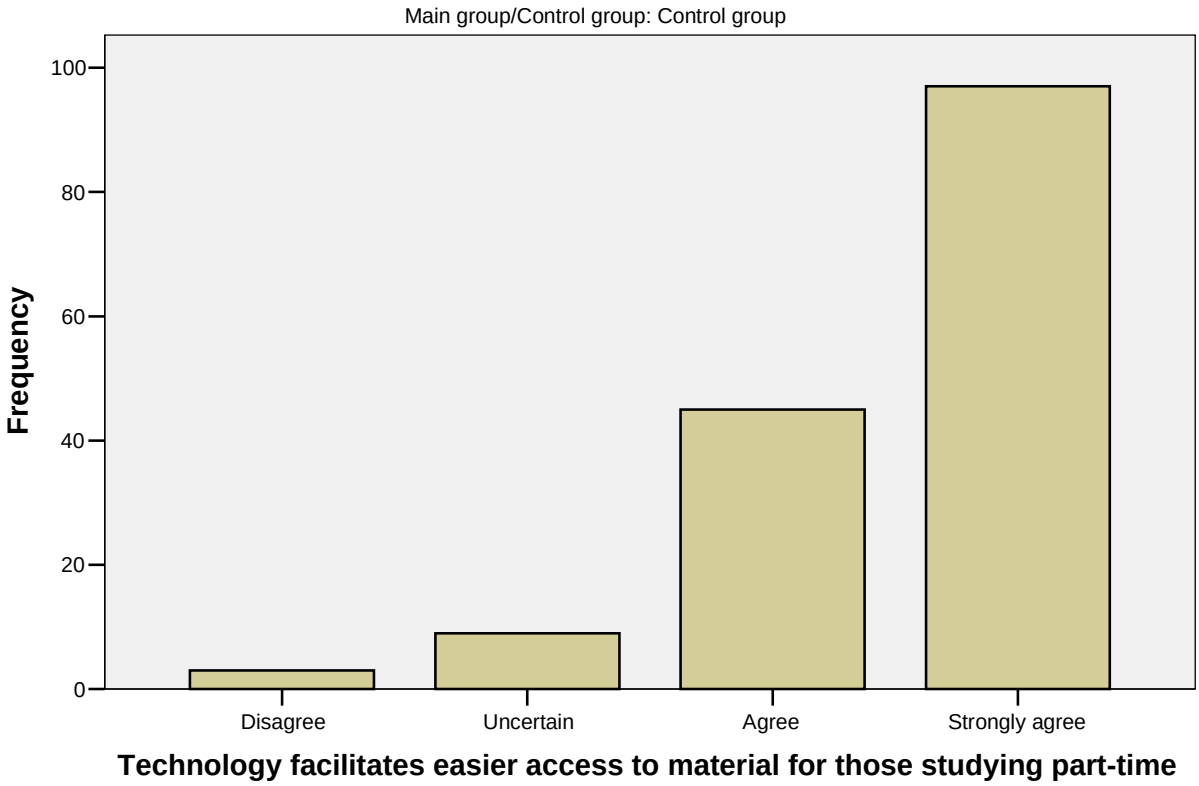


The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

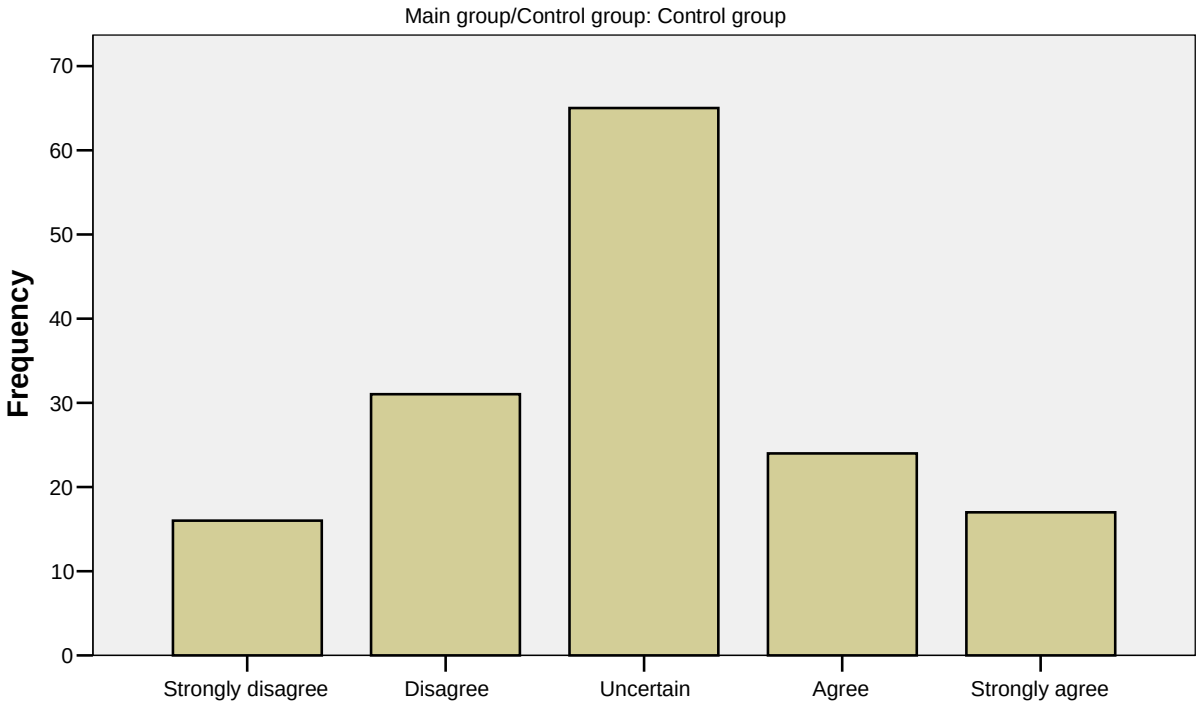


The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Technology facilitates easier access to material for those studying part-time

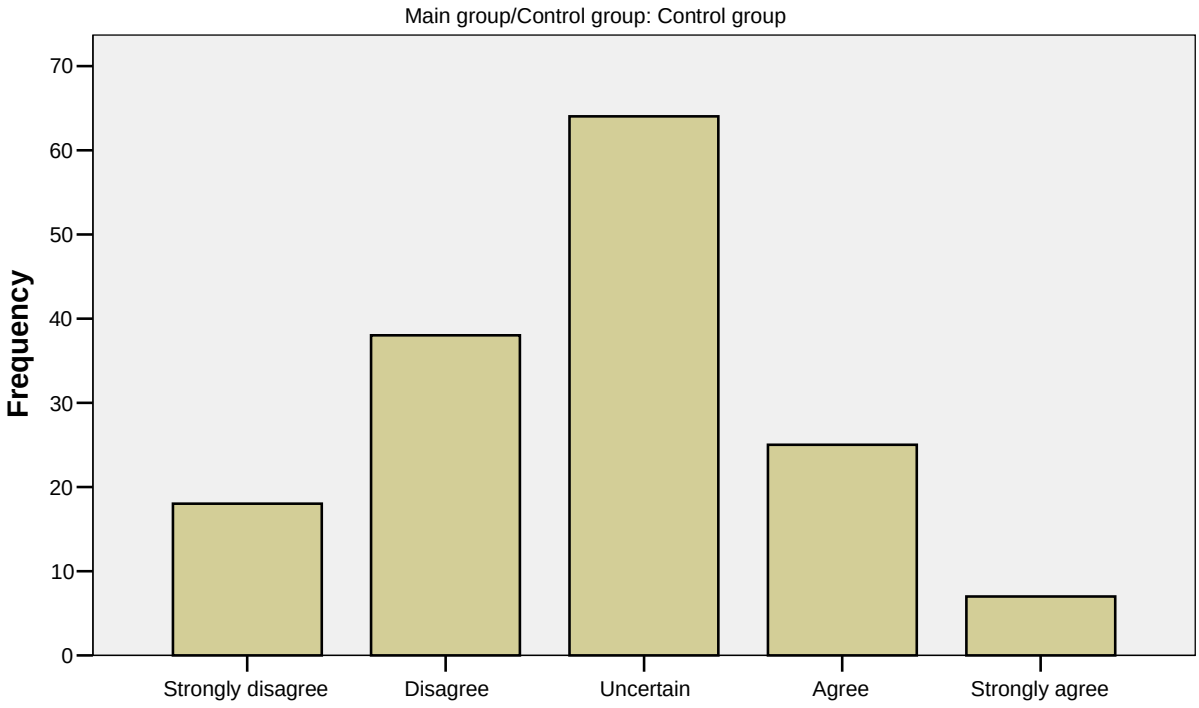


University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities



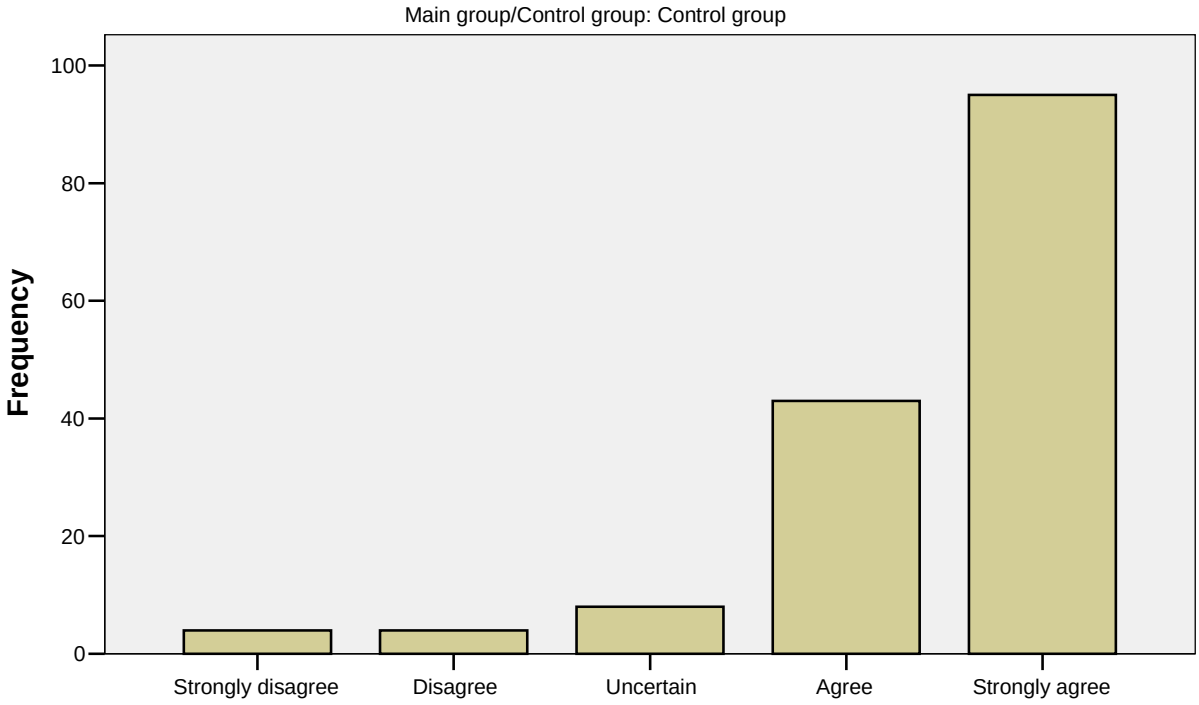
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university



There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Study at an Open University is especially of advantage to adults who have work and family obligations



B.11 Analyse der Varianz (Einweg-ANOVA für Variable Alter)

		Sum of Squares	df	Mean Square
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Between Groups	7,832	4	1,958
	Within Groups	267,549	354	,756
	Total	275,382	358	
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Between Groups	15,325	4	3,831
	Within Groups	431,181	351	1,228
	Total	446,506	355	
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Between Groups	2,657	4	,664
	Within Groups	427,147	352	1,213
	Total	429,804	356	
Only optimistic people think that the impact of technology on learning is beneficial	Between Groups	3,590	4	,897
	Within Groups	352,242	352	1,001
	Total	355,832	356	
From my personal study experience I find that the impact of technology on learning is valuable	Between Groups	1,390	4	,347
	Within Groups	234,128	352	,665
	Total	235,518	356	
Information and communications technology has usually been used to encourage	Between Groups	8,745	4	2,186
	Within Groups	267,832	352	,761
	Total	276,577	356	
Information and communications technology has been used to support the	Between Groups	18,891	4	4,723
	Within Groups	273,914	353	,776
	Total	292,804	357	
Information and communications technology has been used to support more	Between Groups	10,708	4	2,677
	Within Groups	320,035	350	,914
	Total	330,744	354	
Learning is enhanced when text and pictures are integrated in a multimedia environment	Between Groups	3,903	4	,976
	Within Groups	236,388	352	,672
	Total	240,291	356	
Educational games motivate learners and contribute to developing skills such as teamwork	Between Groups	8,417	4	2,104
	Within Groups	353,830	351	1,008
	Total	362,247	355	
The application of new ICT concepts to support learning and teaching and provide Internet access to	Between Groups	14,517	4	3,629
	Within Groups	223,471	331	,675
	Total	237,988	335	
Technology facilitates easier access to material for those studying part-time	Between Groups	4,399	4	1,100
	Within Groups	210,942	332	,635
	Total	215,341	336	
University degrees awarded by open universities may be comparable to degrees	Between Groups	27,261	4	6,815
	Within Groups	436,311	331	1,318
	Total	463,571	335	
There is no difference in learning outcomes between studying at an Open University or at a	Between Groups	17,158	4	4,289
	Within Groups	384,526	330	1,165
	Total	401,684	334	
Study at an Open University is especially of advantage to adults who have work and family	Between Groups	28,277	4	7,069
	Within Groups	156,501	332	,471
	Total	184,777	336	

ANOVA

		F	Sig.
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Between Groups Within Groups Total	2,591	,037
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Between Groups Within Groups Total	3,119	,015
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Between Groups Within Groups Total	,547	,701
Only optimistic people think that the impact of technology on learning is beneficial	Between Groups Within Groups Total	,897	,466
From my personal study experience I find that the impact of technology on learning is valuable	Between Groups Within Groups Total	,522	,719
Information and communications technology has usually been used to encourage	Between Groups Within Groups Total	2,873	,023
Information and communications technology has been used to support the	Between Groups Within Groups Total	6,086	,000
Information and communications technology has been used to support more	Between Groups Within Groups Total	2,928	,021
Learning is enhanced when text and pictures are integrated in a multimedia environment	Between Groups Within Groups Total	1,453	,216
Educational games motivate learners and contribute to developing skills such as teamwork	Between Groups Within Groups Total	2,087	,082
The application of new ICT concepts to support learning and teaching and provide Internet access to	Between Groups Within Groups Total	5,375	,000
Technology facilitates easier access to material for those studying part-time	Between Groups Within Groups Total	1,731	,143
University degrees awarded by open universities may be comparable to degrees	Between Groups Within Groups Total	5,170	,000
There is no difference in learning outcomes between studying at an Open University or at a	Between Groups Within Groups Total	3,681	,006
Study at an Open University is especially of advantage to adults who have work and family	Between Groups Within Groups Total	14,996	,000

Post Hoc Tests

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	Mean Difference (I-J)	Std. Error	Sig.
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	24 or younger	25-29	-,333	,145	,261
		30-40	-,217	,137	,648
		41-50	-,311	,156	,411
		over 50	,147	,207	,973
	25-29	24 or younger	,333	,145	,261
		30-40	,117	,121	,921
		41-50	,022	,142	1,000
		over 50	,480	,197	,204
	30-40	24 or younger	,217	,137	,648
		25-29	-,117	,121	,921
		41-50	-,095	,135	,974
		over 50	,363	,191	,462
	41-50	24 or younger	,311	,156	,411
		25-29	-,022	,142	1,000
		30-40	,095	,135	,974
		over 50	,458	,205	,290
	over 50	24 or younger	-,147	,207	,973
		25-29	-,480	,197	,204
		30-40	-,363	,191	,462
		41-50	-,458	,205	,290
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	24 or younger	25-29	,211	,186	,863
		30-40	-,071	,176	,997
		41-50	-,376	,200	,475
		over 50	,273	,264	,899
	25-29	24 or younger	-,211	,186	,863
		30-40	-,282	,155	,511
		41-50	-,587*	,182	,036
		over 50	,062	,251	1,000
	30-40	24 or younger	,071	,176	,997
		25-29	,282	,155	,511
		41-50	-,305	,172	,534
		over 50	,344	,244	,738
	41-50	24 or younger	,376	,200	,475
		25-29	,587*	,182	,036
		30-40	,305	,172	,534
		over 50	,649	,261	,190
	over 50	24 or younger	-,273	,264	,899
		25-29	-,062	,251	1,000
		30-40	-,344	,244	,738
		41-50	-,649	,261	,190
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	24 or younger	25-29	,008	,184	1,000
		30-40	-,117	,174	,978
		41-50	-,224	,198	,865
		over 50	-,153	,262	,987
	25-29	24 or younger	-,008	,184	1,000
		30-40	-,124	,155	,958
		41-50	-,232	,181	,802
		over 50	-,161	,250	,981
	30-40	24 or younger	,117	,174	,978
		25-29	,124	,155	,958
		41-50	-,107	,171	,983
		over 50	-,037	,242	1,000

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	Mean Difference (I-J)	Std. Error	Sig.
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	41-50	24 or younger	,224	,198	,865
		25-29	,232	,181	,802
		30-40	,107	,171	,983
		over 50	,071	,260	,999
	over 50	24 or younger	,153	,262	,987
		25-29	,161	,250	,981
		30-40	,037	,242	1,000
		41-50	-,071	,260	,999
Only optimistic people think that the impact of technology on learning is beneficial	24 or younger	25-29	-,017	,167	1,000
		30-40	-,200	,158	,809
		41-50	,016	,180	1,000
		over 50	,083	,242	,998
	25-29	24 or younger	,017	,167	1,000
		30-40	-,183	,140	,788
		41-50	,032	,164	1,000
		over 50	,100	,230	,996
	30-40	24 or younger	,200	,158	,809
		25-29	,183	,140	,788
		41-50	,216	,155	,747
		over 50	,283	,224	,808
	41-50	24 or younger	-,016	,180	1,000
		25-29	-,032	,164	1,000
		30-40	-,216	,155	,747
		over 50	,068	,239	,999
	over 50	24 or younger	-,083	,242	,998
		25-29	-,100	,230	,996
		30-40	-,283	,224	,808
		41-50	-,068	,239	,999
From my personal study experience I find that the impact of technology on learning is valuable	24 or younger	25-29	-,022	,136	1,000
		30-40	-,153	,129	,844
		41-50	-,107	,147	,970
		over 50	-,047	,194	1,000
	25-29	24 or younger	,022	,136	1,000
		30-40	-,131	,114	,859
		41-50	-,085	,133	,982
		over 50	-,024	,184	1,000
	30-40	24 or younger	,153	,129	,844
		25-29	,131	,114	,859
		41-50	,046	,127	,998
		over 50	,106	,180	,986
	41-50	24 or younger	,107	,147	,970
		25-29	,085	,133	,982
		30-40	-,046	,127	,998
		over 50	,061	,192	,999
	over 50	24 or younger	,047	,194	1,000
		25-29	,024	,184	1,000
		30-40	-,106	,180	,986
		41-50	-,061	,192	,999
Information and communications technology has usually been used to encourage us to be active participants	24 or younger	25-29	,396	,146	,119
		30-40	,313	,138	,275
		41-50	,186	,157	,841
		over 50	,573	,208	,109

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	Mean Difference (I-J)	Std. Error	Sig.
Information and communications technology has usually been used to encourage us to be active participants in learning	25-29	24 or younger	-,396	,146	,119
		30-40	-,083	,122	,977
		41-50	-,210	,143	,708
		over 50	,177	,197	,938
	30-40	24 or younger	-,313	,138	,275
		25-29	,083	,122	,977
		41-50	-,127	,135	,927
		over 50	,260	,192	,765
	41-50	24 or younger	-,186	,157	,841
		25-29	,210	,143	,708
		30-40	,127	,135	,927
		over 50	,387	,206	,474
	over 50	24 or younger	-,573	,208	,109
		25-29	-,177	,197	,938
		30-40	-,260	,192	,765
		41-50	-,387	,206	,474
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	24 or younger	25-29	,490*	,147	,027
		30-40	,525*	,139	,007
		41-50	,584*	,158	,009
		over 50	,890*	,210	,001
	25-29	24 or younger	-,490*	,147	,027
		30-40	,035	,123	,999
		41-50	,094	,144	,980
		over 50	,400	,199	,405
	30-40	24 or younger	-,525*	,139	,007
		25-29	-,035	,123	,999
		41-50	,059	,136	,996
		over 50	,365	,194	,471
	41-50	24 or younger	-,584*	,158	,009
		25-29	-,094	,144	,980
		30-40	-,059	,136	,996
		over 50	,306	,208	,706
	over 50	24 or younger	-,890*	,210	,001
		25-29	-,400	,199	,405
		30-40	-,365	,194	,471
		41-50	-,306	,208	,706
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	24 or younger	25-29	,466	,161	,080
		30-40	,486*	,152	,039
		41-50	,421	,173	,209
		over 50	,321	,228	,739
	25-29	24 or younger	-,466	,161	,080
		30-40	,021	,134	1,000
		41-50	-,045	,157	,999
		over 50	-,144	,216	,979
	30-40	24 or younger	-,486*	,152	,039
		25-29	-,021	,134	1,000
		41-50	-,065	,149	,996
		over 50	-,165	,210	,961
	41-50	24 or younger	-,421	,173	,209
		25-29	,045	,157	,999
		30-40	,065	,149	,996
		over 50	-,100	,226	,996

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	Mean Difference (I-J)	Std. Error	Sig.
Information and communications technology has been used to support more individualized learning	over 50	24 or younger	-,321	,228	,739
		25-29	,144	,216	,979
		30-40	,165	,210	,961
		41-50	,100	,226	,996
Learning is enhanced when text and pictures are integrated in a multimedia environment	24 or younger	25-29	,198	,138	,721
		30-40	,239	,130	,501
		41-50	,275	,148	,485
		over 50	,402	,196	,378
	25-29	24 or younger	-,198	,138	,721
		30-40	,040	,115	,998
		41-50	,077	,134	,988
		over 50	,204	,185	,877
	30-40	24 or younger	-,239	,130	,501
		25-29	-,040	,115	,998
		41-50	,036	,127	,999
		over 50	,163	,180	,935
	41-50	24 or younger	-,275	,148	,485
		25-29	-,077	,134	,988
		30-40	-,036	,127	,999
		over 50	,127	,193	,980
	over 50	24 or younger	-,402	,196	,378
		25-29	-,204	,185	,877
		30-40	-,163	,180	,935
		41-50	-,127	,193	,980
Educational games motivate learners and contribute to developing skills such as teamwork	24 or younger	25-29	-,222	,167	,779
		30-40	,061	,159	,997
		41-50	,202	,182	,872
		over 50	,207	,239	,945
	25-29	24 or younger	,222	,167	,779
		30-40	,283	,140	,398
		41-50	,424	,166	,164
		over 50	,429	,227	,468
	30-40	24 or younger	-,061	,159	,997
		25-29	-,283	,140	,398
		41-50	,141	,157	,937
		over 50	,146	,221	,979
	41-50	24 or younger	-,202	,182	,872
		25-29	-,424	,166	,164
		30-40	-,141	,157	,937
		over 50	,005	,238	1,000
	over 50	24 or younger	-,207	,239	,945
		25-29	-,429	,227	,468
		30-40	-,146	,221	,979
		41-50	-,005	,238	1,000
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	24 or younger	25-29	-,399	,140	,090
		30-40	-,533*	,133	,003
		41-50	-,519*	,153	,023
		over 50	-,005	,227	1,000
	25-29	24 or younger	,399	,140	,090
		30-40	-,134	,116	,855
		41-50	-,121	,139	,945
		over 50	,394	,218	,516

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	Mean Difference (I-J)	Std. Error	Sig.
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	30-40	24 or younger	,533*	,133	,003
		25-29	,134	,116	,855
		41-50	,014	,132	1,000
		over 50	,528	,213	,193
	41-50	24 or younger	,519*	,153	,023
		25-29	,121	,139	,945
		30-40	-,014	,132	1,000
		over 50	,514	,227	,275
	over 50	24 or younger	,005	,227	1,000
		25-29	-,394	,218	,516
		30-40	-,528	,213	,193
		41-50	-,514	,227	,275
Technology facilitates easier access to material for those studying part-time	24 or younger	25-29	-,351	,135	,154
		30-40	-,229	,128	,526
		41-50	-,259	,148	,550
		over 50	-,188	,220	,948
	25-29	24 or younger	,351	,135	,154
		30-40	,122	,113	,884
		41-50	,092	,135	,977
		over 50	,163	,211	,964
	30-40	24 or younger	,229	,128	,526
		25-29	-,122	,113	,884
		41-50	-,030	,128	1,000
		over 50	,041	,207	1,000
	41-50	24 or younger	,259	,148	,550
		25-29	-,092	,135	,977
		30-40	,030	,128	1,000
		over 50	,071	,220	,999
	over 50	24 or younger	,188	,220	,948
		25-29	-,163	,211	,964
		30-40	-,041	,207	1,000
		41-50	-,071	,220	,999
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	24 or younger	25-29	-,043	,195	1,000
		30-40	-,545	,184	,070
		41-50	-,707*	,213	,028
		over 50	-,457	,317	,720
	25-29	24 or younger	,043	,195	1,000
		30-40	-,502	,163	,052
		41-50	-,664*	,195	,022
		over 50	-,415	,305	,763
	30-40	24 or younger	,545	,184	,070
		25-29	,502	,163	,052
		41-50	-,162	,184	,943
		over 50	,088	,298	,999
	41-50	24 or younger	,707*	,213	,028
		25-29	,664*	,195	,022
		30-40	,162	,184	,943
		over 50	,249	,317	,961
	over 50	24 or younger	,457	,317	,720
		25-29	,415	,305	,763
		30-40	-,088	,298	,999
		41-50	-,249	,317	,961

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	Mean Difference (I-J)	Std. Error	Sig.
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	24 or younger	25-29	-,021	,184	1,000
		30-40	-,343	,173	,420
		41-50	-,621	,200	,050
		over 50	-,162	,298	,990
	25-29	24 or younger	,021	,184	1,000
		30-40	-,322	,154	,360
		41-50	-,600*	,184	,033
		over 50	-,141	,287	,993
	30-40	24 or younger	,343	,173	,420
		25-29	,322	,154	,360
		41-50	-,278	,173	,632
		over 50	,180	,280	,981
	41-50	24 or younger	,621	,200	,050
		25-29	,600*	,184	,033
		30-40	,278	,173	,632
		over 50	,458	,298	,668
	over 50	24 or younger	,162	,298	,990
		25-29	,141	,287	,993
		30-40	-,180	,280	,981
		41-50	-,458	,298	,668
Study at an Open University is especially of advantage to adults who have work and family obligations	24 or younger	25-29	-,718*	,116	,000
		30-40	-,760*	,110	,000
		41-50	-,828*	,127	,000
		over 50	-,478	,189	,176
	25-29	24 or younger	,718*	,116	,000
		30-40	-,042	,097	,996
		41-50	-,109	,116	,927
		over 50	,241	,182	,782
	30-40	24 or younger	,760*	,110	,000
		25-29	,042	,097	,996
		41-50	-,067	,110	,985
		over 50	,283	,178	,642
	41-50	24 or younger	,828*	,127	,000
		25-29	,109	,116	,927
		30-40	,067	,110	,985
		over 50	,350	,189	,492
	over 50	24 or younger	,478	,189	,176
		25-29	-,241	,182	,782
		30-40	-,283	,178	,642
		41-50	-,350	,189	,492

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	95% Confidence Interval	
			Lower Bound	Upper Bound
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	24 or younger	25-29	-,78	,12
		30-40	-,64	,21
		41-50	-,80	,17
		over 50	-,49	,79
	25-29	24 or younger	-,12	,78
		30-40	-,26	,49
		41-50	-,42	,46
		over 50	-,13	1,09
	30-40	24 or younger	-,21	,64
		25-29	-,49	,26
		41-50	-,51	,32
		over 50	-,23	,96
	41-50	24 or younger	-,17	,80
		25-29	-,46	,42
		30-40	-,32	,51
		over 50	-,18	1,09
	over 50	24 or younger	-,79	,49
		25-29	-1,09	,13
		30-40	-,96	,23
		41-50	-1,09	,18
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	24 or younger	25-29	-,37	,79
		30-40	-,62	,48
		41-50	-,99	,24
		over 50	-,55	1,09
	25-29	24 or younger	-,79	,37
		30-40	-,76	,20
		41-50	-1,15	-,02
		over 50	-,71	,84
	30-40	24 or younger	-,48	,62
		25-29	-,20	,76
		41-50	-,84	,23
		over 50	-,41	1,10
	41-50	24 or younger	-,24	,99
		25-29	,02	1,15
		30-40	-,23	,84
		over 50	-,16	1,46
	over 50	24 or younger	-1,09	,55
		25-29	-,84	,71
		30-40	-1,10	,41
		41-50	-1,46	,16
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	24 or younger	25-29	-,56	,58
		30-40	-,66	,42
		41-50	-,84	,39
		over 50	-,97	,66
	25-29	24 or younger	-,58	,56
		30-40	-,60	,35
		41-50	-,79	,33
		over 50	-,93	,61
	30-40	24 or younger	-,42	,66
		25-29	-,35	,60
		41-50	-,64	,42
		over 50	-,79	,71

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	95% Confidence Interval	
			Lower Bound	Upper Bound
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	41-50	24 or younger	-,39	,84
		25-29	-,33	,79
		30-40	-,42	,64
		over 50	-,73	,88
	over 50	24 or younger	-,66	,97
		25-29	-,61	,93
		30-40	-,71	,79
		41-50	-,88	,73
Only optimistic people think that the impact of technology on learning is beneficial	24 or younger	25-29	-,53	,50
		30-40	-,69	,29
		41-50	-,54	,57
		over 50	-,66	,83
	25-29	24 or younger	-,50	,53
		30-40	-,62	,25
		41-50	-,48	,54
		over 50	-,61	,81
	30-40	24 or younger	-,29	,69
		25-29	-,25	,62
		41-50	-,26	,70
		over 50	-,41	,98
	41-50	24 or younger	-,57	,54
		25-29	-,54	,48
		30-40	-,70	,26
		over 50	-,67	,81
	over 50	24 or younger	-,83	,66
		25-29	-,81	,61
		30-40	-,98	,41
		41-50	-,81	,67
From my personal study experience I find that the impact of technology on learning is valuable	24 or younger	25-29	-,44	,40
		30-40	-,55	,25
		41-50	-,56	,35
		over 50	-,65	,55
	25-29	24 or younger	-,40	,44
		30-40	-,48	,22
		41-50	-,50	,33
		over 50	-,60	,55
	30-40	24 or younger	-,25	,55
		25-29	-,22	,48
		41-50	-,35	,44
		over 50	-,45	,66
	41-50	24 or younger	-,35	,56
		25-29	-,33	,50
		30-40	-,44	,35
		over 50	-,54	,66
	over 50	24 or younger	-,55	,65
		25-29	-,55	,60
		30-40	-,66	,45
		41-50	-,66	,54
Information and communications technology has usually been used to encourage us to be active participants	24 or younger	25-29	-,05	,85
		30-40	-,11	,74
		41-50	-,30	,67
		over 50	-,07	1,22

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	95% Confidence Interval	
			Lower Bound	Upper Bound
Information and communications technology has usually been used to encourage us to be active participants in learning	25-29	24 or younger	-,85	,05
		30-40	-,46	,30
		41-50	-,65	,23
		over 50	-,43	,79
	30-40	24 or younger	-,74	,11
		25-29	-,30	,46
		41-50	-,55	,29
		over 50	-,33	,85
	41-50	24 or younger	-,67	,30
		25-29	-,23	,65
		30-40	-,29	,55
		over 50	-,25	1,02
	over 50	24 or younger	-1,22	,07
		25-29	-,79	,43
		30-40	-,85	,33
		41-50	-1,02	,25
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	24 or younger	25-29	,03	,95
		30-40	,09	,96
		41-50	,09	1,07
		over 50	,24	1,54
	25-29	24 or younger	-,95	-,03
		30-40	-,35	,42
		41-50	-,35	,54
		over 50	-,22	1,02
	30-40	24 or younger	-,96	-,09
		25-29	-,42	,35
		41-50	-,36	,48
		over 50	-,23	,96
	41-50	24 or younger	-1,07	-,09
		25-29	-,54	,35
		30-40	-,48	,36
		over 50	-,34	,95
	over 50	24 or younger	-1,54	-,24
		25-29	-1,02	,22
		30-40	-,96	,23
		41-50	-,95	,34
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	24 or younger	25-29	-,03	,96
		30-40	,01	,96
		41-50	-,12	,96
		over 50	-,39	1,03
	25-29	24 or younger	-,96	,03
		30-40	-,39	,44
		41-50	-,53	,44
		over 50	-,81	,53
	30-40	24 or younger	-,96	-,01
		25-29	-,44	,39
		41-50	-,53	,40
		over 50	-,82	,49
	41-50	24 or younger	-,96	,12
		25-29	-,44	,53
		30-40	-,40	,53
		over 50	-,80	,60

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	95% Confidence Interval	
			Lower Bound	Upper Bound
Information and communications technology has been used to support more individualized learning	over 50	24 or younger	-1,03	,39
		25-29	-,53	,81
		30-40	-,49	,82
		41-50	-,60	,80
Learning is enhanced when text and pictures are integrated in a multimedia environment	24 or younger	25-29	-,23	,62
		30-40	-,16	,64
		41-50	-,18	,73
		over 50	-,20	1,01
	25-29	24 or younger	-,62	,23
		30-40	-,31	,40
		41-50	-,34	,49
		over 50	-,37	,78
	30-40	24 or younger	-,64	,16
		25-29	-,40	,31
		41-50	-,36	,43
		over 50	-,39	,72
	41-50	24 or younger	-,73	,18
		25-29	-,49	,34
		30-40	-,43	,36
		over 50	-,47	,73
	over 50	24 or younger	-1,01	,20
		25-29	-,78	,37
		30-40	-,72	,39
		41-50	-,73	,47
Educational games motivate learners and contribute to developing skills such as teamwork	24 or younger	25-29	-,74	,30
		30-40	-,43	,55
		41-50	-,36	,77
		over 50	-,53	,95
	25-29	24 or younger	-,30	,74
		30-40	-,15	,72
		41-50	-,09	,94
		over 50	-,27	1,13
	30-40	24 or younger	-,55	,43
		25-29	-,72	,15
		41-50	-,35	,63
		over 50	-,54	,83
	41-50	24 or younger	-,77	,36
		25-29	-,94	,09
		30-40	-,63	,35
		over 50	-,73	,74
	over 50	24 or younger	-,95	,53
		25-29	-1,13	,27
		30-40	-,83	,54
		41-50	-,74	,73
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	24 or younger	25-29	-,83	,04
		30-40	-,94	-,12
		41-50	-,99	-,04
		over 50	-,71	,70
	25-29	24 or younger	-,04	,83
		30-40	-,49	,23
		41-50	-,55	,31
		over 50	-,28	1,07

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	95% Confidence Interval	
			Lower Bound	Upper Bound
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	30-40	24 or younger	,12	,94
		25-29	-,23	,49
		41-50	-,40	,42
		over 50	-,13	1,19
	41-50	24 or younger	,04	,99
		25-29	-,31	,55
		30-40	-,42	,40
		over 50	-,19	1,22
	over 50	24 or younger	-,70	,71
		25-29	-1,07	,28
		30-40	-1,19	,13
		41-50	-1,22	,19
Technology facilitates easier access to material for those studying part-time	24 or younger	25-29	-,77	,07
		30-40	-,63	,17
		41-50	-,72	,20
		over 50	-,87	,49
	25-29	24 or younger	-,07	,77
		30-40	-,23	,47
		41-50	-,33	,51
		over 50	-,49	,82
	30-40	24 or younger	-,17	,63
		25-29	-,47	,23
		41-50	-,43	,37
		over 50	-,60	,68
	41-50	24 or younger	-,20	,72
		25-29	-,51	,33
		30-40	-,37	,43
		over 50	-,61	,75
	over 50	24 or younger	-,49	,87
		25-29	-,82	,49
		30-40	-,68	,60
		41-50	-,75	,61
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	24 or younger	25-29	-,65	,56
		30-40	-1,12	,03
		41-50	-1,37	-,05
		over 50	-1,44	,52
	25-29	24 or younger	-,56	,65
		30-40	-1,01	,00
		41-50	-1,27	-,06
		over 50	-1,36	,53
	30-40	24 or younger	-,03	1,12
		25-29	,00	1,01
		41-50	-,73	,41
		over 50	-,84	1,01
	41-50	24 or younger	,05	1,37
		25-29	,06	1,27
		30-40	-,41	,73
		over 50	-,73	1,23
	over 50	24 or younger	-,52	1,44
		25-29	-,53	1,36
		30-40	-1,01	,84
		41-50	-1,23	,73

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your age grouping?	(J) What is your age grouping?	95% Confidence Interval	
			Lower Bound	Upper Bound
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	24 or younger	25-29	-,59	,55
		30-40	-,88	,19
		41-50	-1,24	,00
		over 50	-1,08	,76
	25-29	24 or younger	-,55	,59
		30-40	-,80	,15
		41-50	-1,17	-,03
		over 50	-1,03	,75
	30-40	24 or younger	-,19	,88
		25-29	-,15	,80
		41-50	-,81	,26
		over 50	-,69	1,05
	41-50	24 or younger	,00	1,24
		25-29	,03	1,17
		30-40	-,26	,81
		over 50	-,46	1,38
	over 50	24 or younger	-,76	1,08
		25-29	-,75	1,03
		30-40	-1,05	,69
		41-50	-1,38	,46
Study at an Open University is especially of advantage to adults who have work and family obligations	24 or younger	25-29	-1,08	-,36
		30-40	-1,10	-,42
		41-50	-1,22	-,43
		over 50	-1,06	,11
	25-29	24 or younger	,36	1,08
		30-40	-,34	,26
		41-50	-,47	,25
		over 50	-,32	,80
	30-40	24 or younger	,42	1,10
		25-29	-,26	,34
		41-50	-,41	,27
		over 50	-,27	,83
	41-50	24 or younger	,43	1,22
		25-29	-,25	,47
		30-40	-,27	,41
		over 50	-,24	,94
	over 50	24 or younger	-,11	1,06
		25-29	-,80	,32
		30-40	-,83	,27
		41-50	-,94	,24

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

Thanks to technology, the problems of access to learning for students with disabilities have been resolved

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
over 50	25	3,12
24 or younger	60	3,27
30-40	120	3,48
41-50	64	3,58
25-29	90	3,60
Sig.		,083

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,504.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
over 50	25	2,32
25-29	89	2,38
24 or younger	59	2,59
30-40	119	2,66
41-50	64	2,97
Sig.		,056

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,222.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
25-29	88	3,16
24 or younger	60	3,17
30-40	120	3,28
over 50	25	3,32
41-50	64	3,39
Sig.		,878

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,355.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Only optimistic people think that the impact of technology on learning is beneficial

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
over 50	24	3,42
41-50	64	3,48
24 or younger	60	3,50
25-29	89	3,52
30-40	120	3,70
Sig.		,709

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 53,460.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
30-40	119	3,39
25-29	89	3,42
41-50	63	3,46
over 50	25	3,56
24 or younger	59	3,88
Sig.		,139

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,077.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

From my personal study experience I find that the impact of technology on learning is valuable

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
24 or younger	60	4,03
25-29	90	4,06
over 50	25	4,08
41-50	64	4,14
30-40	118	4,19
Sig.		,916

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,420.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has usually been used to encourage us to be active participants in learning

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05	
		1	2
over 50	25	3,16	
25-29	89	3,34	3,34
30-40	119	3,42	3,42
41-50	64	3,55	3,55
24 or younger	60		3,73
Sig.		,256	,232

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,389.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05	
		1	2
over 50	25	2,96	
41-50	64	3,27	
30-40	120	3,33	
25-29	89	3,36	3,36
24 or younger	60		3,85
Sig.		,234	,079

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,430.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Learning is enhanced when text and pictures are integrated in a multimedia environment

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
over 50	25	3,92
41-50	64	4,05
30-40	120	4,08
25-29	89	4,12
24 or younger	59	4,32
Sig.		,166

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,263.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Educational games motivate learners and contribute to developing skills such as teamwork

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
over 50	25	3,56
41-50	62	3,56
30-40	119	3,71
24 or younger	60	3,77
25-29	90	3,99
Sig.		,295

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 54,165.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
24 or younger	57	3,88
over 50	17	3,88
25-29	87	4,28
41-50	58	4,40
30-40	117	4,41
Sig.		,057

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 43,995.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Technology facilitates easier access to material for those studying part-time

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
24 or younger	58	4,22
over 50	17	4,41
30-40	117	4,45
41-50	58	4,48
25-29	87	4,57
Sig.		,373

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 44,112.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
24 or younger	58	3,19
25-29	86	3,23
over 50	17	3,65
30-40	117	3,74
41-50	58	3,90
Sig.		,082

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 44,060.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05
		1
24 or younger	58	2,90
25-29	85	2,92
over 50	17	3,06
30-40	117	3,24
41-50	58	3,52
Sig.		,125

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 44,007.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Study at an Open University is especially of advantage to adults who have work and family obligations

Scheffe[a,b]

What is your age grouping?	N	Subset for alpha = .05	
		1	2
24 or younger	58	4,05	
over 50	17		4,53
25-29	87		4,77
30-40	117		4,81
41-50	58		4,88
Sig.		1,000	,223

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 44,112.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

B.12 Einweg-ANOVA für Variable Bildung

ANOVA

		Sum of Squares	df	Mean Square
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Between Groups	2,208	2	1,104
	Within Groups	270,511	353	,766
	Total	272,719	355	
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Between Groups	5,313	2	2,657
	Within Groups	440,058	350	1,257
	Total	445,371	352	
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Between Groups	13,203	2	6,601
	Within Groups	413,916	351	1,179
	Total	427,119	353	
Only optimistic people think that the impact of technology on learning is beneficial	Between Groups	,493	2	,247
	Within Groups	354,761	351	1,011
	Total	355,254	353	
From my personal study experience I find that the impact of technology on learning is valuable	Between Groups	,264	2	,132
	Within Groups	234,440	351	,668
	Total	234,703	353	
Information and communications technology has usually been used to encourage	Between Groups	3,507	2	1,753
	Within Groups	272,440	351	,776
	Total	275,946	353	
Information and communications technology has been used to support the	Between Groups	11,389	2	5,694
	Within Groups	277,400	352	,788
	Total	288,789	354	
Information and communications technology has been used to support more	Between Groups	1,845	2	,922
	Within Groups	328,153	349	,940
	Total	329,997	351	
Learning is enhanced when text and pictures are integrated in a multimedia environment	Between Groups	2,789	2	1,395
	Within Groups	235,914	351	,672
	Total	238,703	353	
Educational games motivate learners and contribute to developing skills such as teamwork	Between Groups	1,987	2	,994
	Within Groups	358,545	350	1,024
	Total	360,533	352	
The application of new ICT concepts to support learning and teaching and provide Internet access to	Between Groups	1,444	2	,722
	Within Groups	233,301	330	,707
	Total	234,745	332	
Technology facilitates easier access to material for those studying part-time	Between Groups	2,814	2	1,407
	Within Groups	211,920	331	,640
	Total	214,734	333	
University degrees awarded by open universities may be comparable to degrees	Between Groups	2,595	2	1,297
	Within Groups	460,186	330	1,395
	Total	462,781	332	
There is no difference in learning outcomes between studying at an Open University or at a	Between Groups	3,097	2	1,548
	Within Groups	397,804	329	1,209
	Total	400,901	331	
Study at an Open University is especially of advantage to adults who have work and family	Between Groups	1,264	2	,632
	Within Groups	182,509	331	,551
	Total	183,772	333	

ANOVA

		F	Sig.
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Between Groups Within Groups Total	1,441	,238
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Between Groups Within Groups Total	2,113	,122
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Between Groups Within Groups Total	5,598	,004
Only optimistic people think that the impact of technology on learning is beneficial	Between Groups Within Groups Total	,244	,784
From my personal study experience I find that the impact of technology on learning is valuable	Between Groups Within Groups Total	,197	,821
Information and communications technology has usually been used to encourage	Between Groups Within Groups Total	2,259	,106
Information and communications technology has been used to support the	Between Groups Within Groups Total	7,226	,001
Information and communications technology has been used to support more	Between Groups Within Groups Total	,981	,376
Learning is enhanced when text and pictures are integrated in a multimedia environment	Between Groups Within Groups Total	2,075	,127
Educational games motivate learners and contribute to developing skills such as teamwork	Between Groups Within Groups Total	,970	,380
The application of new ICT concepts to support learning and teaching and provide Internet access to	Between Groups Within Groups Total	1,021	,361
Technology facilitates easier access to material for those studying part-time	Between Groups Within Groups Total	2,198	,113
University degrees awarded by open universities may be comparable to degrees	Between Groups Within Groups Total	,930	,395
There is no difference in learning outcomes between studying at an Open University or at a	Between Groups Within Groups Total	1,280	,279
Study at an Open University is especially of advantage to adults who have work and family	Between Groups Within Groups Total	1,146	,319

Post Hoc Tests

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	Mean Difference (I-J)	Std. Error
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	High school matriculation	One to three years of post-secondary education	-,137	,125
		Four or more years of post-secondary education	,093	,106
	One to three years of post-secondary education	High school matriculation	,137	,125
		Four or more years of post-secondary education	,230	,136
	Four or more years of post-secondary education	High school matriculation	-,093	,106
		One to three years of post-secondary education	-,230	,136
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	High school matriculation	One to three years of post-secondary education	,038	,163
		Four or more years of post-secondary education	,273	,136
	One to three years of post-secondary education	High school matriculation	-,038	,163
		Four or more years of post-secondary education	,236	,176
	Four or more years of post-secondary education	High school matriculation	-,273	,136
		One to three years of post-secondary education	-,236	,176
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	High school matriculation	One to three years of post-secondary education	-,183	,156
		Four or more years of post-secondary education	,343*	,132
	One to three years of post-secondary education	High school matriculation	,183	,156
		Four or more years of post-secondary education	,526*	,169
	Four or more years of post-secondary education	High school matriculation	-,343*	,132
		One to three years of post-secondary education	-,526*	,169
Only optimistic people think that the impact of technology on learning is beneficial	High school matriculation	One to three years of post-secondary education	-,015	,145
		Four or more years of post-secondary education	-,084	,122
	One to three years of post-secondary education	High school matriculation	,015	,145
		Four or more years of post-secondary education	-,069	,157
	Four or more years of post-secondary education	High school matriculation	,084	,122
		One to three years of post-secondary education	,069	,157
From my personal study experience I find that the impact of technology on learning is valuable	High school matriculation	One to three years of post-secondary education	,029	,118
		Four or more years of post-secondary education	,062	,099
	One to three years of post-secondary education	High school matriculation	-,029	,118
		Four or more years of post-secondary education	,033	,127
	Four or more years of post-secondary education	High school matriculation	-,062	,099
		One to three years of post-secondary education	-,033	,127
Information and communications technology has usually been used to encourage us to be active participants	High school matriculation	One to three years of post-secondary education	-,026	,127
		Four or more years of post-secondary education	,208	,107

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	Mean Difference (I-J)	Std. Error
Information and communications technology has usually been used to encourage us to be active participants in learning	One to three years of post-secondary education	High school matriculation	,026	,127
		Four or more years of post-secondary education	,234	,137
	Four or more years of post-secondary education	High school matriculation	-,208	,107
		One to three years of post-secondary education	-,234	,137
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	High school matriculation	One to three years of post-secondary education	,020	,128
		Four or more years of post-secondary education	,392*	,108
	One to three years of post-secondary education	High school matriculation	-,020	,128
		Four or more years of post-secondary education	,373*	,138
	Four or more years of post-secondary education	High school matriculation	-,392*	,108
		One to three years of post-secondary education	-,373*	,138
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	High school matriculation	One to three years of post-secondary education	-,141	,141
		Four or more years of post-secondary education	,073	,118
	One to three years of post-secondary education	High school matriculation	,141	,141
		Four or more years of post-secondary education	,213	,152
	Four or more years of post-secondary education	High school matriculation	-,073	,118
		One to three years of post-secondary education	-,213	,152
Learning is enhanced when text and pictures are integrated in a multimedia environment	High school matriculation	One to three years of post-secondary education	,135	,118
		Four or more years of post-secondary education	,196	,100
	One to three years of post-secondary education	High school matriculation	-,135	,118
		Four or more years of post-secondary education	,061	,128
	Four or more years of post-secondary education	High school matriculation	-,196	,100
		One to three years of post-secondary education	-,061	,128
Educational games motivate learners and contribute to developing skills such as teamwork	High school matriculation	One to three years of post-secondary education	-,105	,146
		Four or more years of post-secondary education	,110	,123
	One to three years of post-secondary education	High school matriculation	,105	,146
		Four or more years of post-secondary education	,215	,158
	Four or more years of post-secondary education	High school matriculation	-,110	,123
		One to three years of post-secondary education	-,215	,158

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	Mean Difference (I-J)	Std. Error
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	High school matriculation	One to three years of post-secondary education	-,155	,131
		Four or more years of post-secondary education	,043	,104
	One to three years of post-secondary education	High school matriculation	,155	,131
		Four or more years of post-secondary education	,198	,141
	Four or more years of post-secondary education	High school matriculation	-,043	,104
		One to three years of post-secondary education	-,198	,141
Technology facilitates easier access to material for those studying part-time	High school matriculation	One to three years of post-secondary education	-,123	,124
		Four or more years of post-secondary education	-,204	,099
	One to three years of post-secondary education	High school matriculation	,123	,124
		Four or more years of post-secondary education	-,081	,133
	Four or more years of post-secondary education	High school matriculation	,204	,099
		One to three years of post-secondary education	,081	,133
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	High school matriculation	One to three years of post-secondary education	-,080	,183
		Four or more years of post-secondary education	,161	,146
	One to three years of post-secondary education	High school matriculation	,080	,183
		Four or more years of post-secondary education	,241	,197
	Four or more years of post-secondary education	High school matriculation	-,161	,146
		One to three years of post-secondary education	-,241	,197
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	High school matriculation	One to three years of post-secondary education	-,129	,170
		Four or more years of post-secondary education	,152	,136
	One to three years of post-secondary education	High school matriculation	,129	,170
		Four or more years of post-secondary education	,281	,183
	Four or more years of post-secondary education	High school matriculation	-,152	,136
		One to three years of post-secondary education	-,281	,183
Study at an Open University is especially of advantage to adults who have work and family obligations	High school matriculation	One to three years of post-secondary education	-,076	,115
		Four or more years of post-secondary education	-,137	,092
	One to three years of post-secondary education	High school matriculation	,076	,115
		Four or more years of post-secondary education	-,061	,124
	Four or more years of post-secondary education	High school matriculation	,137	,092
		One to three years of post-secondary education	,061	,124

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	Sig.	95% Confidence Interval Lower Bound
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	High school matriculation	One to three years of post-secondary education	,551	-,45
		Four or more years of post-secondary education	,681	-,17
	One to three years of post-secondary education	High school matriculation	,551	-,17
		Four or more years of post-secondary education	,239	-,10
	Four or more years of post-secondary education	High school matriculation	,681	-,35
		One to three years of post-secondary education	,239	-,56
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	High school matriculation	One to three years of post-secondary education	,974	-,36
		Four or more years of post-secondary education	,134	-,06
	One to three years of post-secondary education	High school matriculation	,974	-,44
		Four or more years of post-secondary education	,411	-,20
	Four or more years of post-secondary education	High school matriculation	,134	-,61
		One to three years of post-secondary education	,411	-,67
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	High school matriculation	One to three years of post-secondary education	,499	-,57
		Four or more years of post-secondary education	,036	,02
	One to three years of post-secondary education	High school matriculation	,499	-,20
		Four or more years of post-secondary education	,008	,11
	Four or more years of post-secondary education	High school matriculation	,036	-,67
		One to three years of post-secondary education	,008	-,94
Only optimistic people think that the impact of technology on learning is beneficial	High school matriculation	One to three years of post-secondary education	,995	-,37
		Four or more years of post-secondary education	,790	-,38
	One to three years of post-secondary education	High school matriculation	,995	-,34
		Four or more years of post-secondary education	,907	-,45
	Four or more years of post-secondary education	High school matriculation	,790	-,22
		One to three years of post-secondary education	,907	-,32
From my personal study experience I find that the impact of technology on learning is valuable	High school matriculation	One to three years of post-secondary education	,971	-,26
		Four or more years of post-secondary education	,822	-,18
	One to three years of post-secondary education	High school matriculation	,971	-,32
		Four or more years of post-secondary education	,966	-,28
	Four or more years of post-secondary education	High school matriculation	,822	-,31
		One to three years of post-secondary education	,966	-,35
Information and communications technology has usually been used to encourage us to be active participants	High school matriculation	One to three years of post-secondary education	,979	-,34
		Four or more years of post-secondary education	,154	-,06

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	Sig.	95% Confidence Interval Lower Bound
Information and communications technology has usually been used to encourage us to be active participants in learning	One to three years of post-secondary education	High school matriculation	,979	-,29
		Four or more years of post-secondary education	,237	-,10
	Four or more years of post-secondary education	High school matriculation	,154	-,47
		One to three years of post-secondary education	,237	-,57
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	High school matriculation	One to three years of post-secondary education	,988	-,29
		Four or more years of post-secondary education	,001	,13
	One to three years of post-secondary education	High school matriculation	,988	-,33
		Four or more years of post-secondary education	,027	,03
	Four or more years of post-secondary education	High school matriculation	,001	-,66
		One to three years of post-secondary education	,027	-,71
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	High school matriculation	One to three years of post-secondary education	,610	-,49
		Four or more years of post-secondary education	,826	-,22
	One to three years of post-secondary education	High school matriculation	,610	-,21
		Four or more years of post-secondary education	,377	-,16
	Four or more years of post-secondary education	High school matriculation	,826	-,36
		One to three years of post-secondary education	,377	-,59
Learning is enhanced when text and pictures are integrated in a multimedia environment	High school matriculation	One to three years of post-secondary education	,521	-,16
		Four or more years of post-secondary education	,147	-,05
	One to three years of post-secondary education	High school matriculation	,521	-,43
		Four or more years of post-secondary education	,894	-,25
	Four or more years of post-secondary education	High school matriculation	,147	-,44
		One to three years of post-secondary education	,894	-,37
Educational games motivate learners and contribute to developing skills such as teamwork	High school matriculation	One to three years of post-secondary education	,773	-,46
		Four or more years of post-secondary education	,668	-,19
	One to three years of post-secondary education	High school matriculation	,773	-,25
		Four or more years of post-secondary education	,395	-,17
	Four or more years of post-secondary education	High school matriculation	,668	-,41
		One to three years of post-secondary education	,395	-,60

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	Sig.	95% Confidence Interval Lower Bound
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	High school matriculation	One to three years of post-secondary education	,499	-,48
		Four or more years of post-secondary education	,917	-,21
	One to three years of post-secondary education	High school matriculation	,499	-,17
		Four or more years of post-secondary education	,374	-,15
	Four or more years of post-secondary education	High school matriculation	,917	-,30
		One to three years of post-secondary education	,374	-,54
Technology facilitates easier access to material for those studying part-time	High school matriculation	One to three years of post-secondary education	,610	-,43
		Four or more years of post-secondary education	,122	-,45
	One to three years of post-secondary education	High school matriculation	,610	-,18
		Four or more years of post-secondary education	,833	-,41
	Four or more years of post-secondary education	High school matriculation	,122	-,04
		One to three years of post-secondary education	,833	-,25
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	High school matriculation	One to three years of post-secondary education	,909	-,53
		Four or more years of post-secondary education	,546	-,20
	One to three years of post-secondary education	High school matriculation	,909	-,37
		Four or more years of post-secondary education	,473	-,24
	Four or more years of post-secondary education	High school matriculation	,546	-,52
		One to three years of post-secondary education	,473	-,73
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	High school matriculation	One to three years of post-secondary education	,750	-,55
		Four or more years of post-secondary education	,537	-,18
	One to three years of post-secondary education	High school matriculation	,750	-,29
		Four or more years of post-secondary education	,309	-,17
	Four or more years of post-secondary education	High school matriculation	,537	-,49
		One to three years of post-secondary education	,309	-,73
Study at an Open University is especially of advantage to adults who have work and family obligations	High school matriculation	One to three years of post-secondary education	,804	-,36
		Four or more years of post-secondary education	,327	-,36
	One to three years of post-secondary education	High school matriculation	,804	-,21
		Four or more years of post-secondary education	,884	-,37
	Four or more years of post-secondary education	High school matriculation	,327	-,09
		One to three years of post-secondary education	,884	-,24

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	95% Confidence Interval Upper Bound
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	High school matriculation	One to three years of post-secondary education	,17
		Four or more years of post-secondary education	,35
	One to three years of post-secondary education	High school matriculation	,45
		Four or more years of post-secondary education	,56
	Four or more years of post-secondary education	High school matriculation	,17
		One to three years of post-secondary education	,10
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	High school matriculation	One to three years of post-secondary education	,44
		Four or more years of post-secondary education	,61
	One to three years of post-secondary education	High school matriculation	,36
		Four or more years of post-secondary education	,67
	Four or more years of post-secondary education	High school matriculation	,06
		One to three years of post-secondary education	,20
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	High school matriculation	One to three years of post-secondary education	,20
		Four or more years of post-secondary education	,67
	One to three years of post-secondary education	High school matriculation	,57
		Four or more years of post-secondary education	,94
	Four or more years of post-secondary education	High school matriculation	-,02
		One to three years of post-secondary education	-,11
Only optimistic people think that the impact of technology on learning is beneficial	High school matriculation	One to three years of post-secondary education	,34
		Four or more years of post-secondary education	,22
	One to three years of post-secondary education	High school matriculation	,37
		Four or more years of post-secondary education	,32
	Four or more years of post-secondary education	High school matriculation	,38
		One to three years of post-secondary education	,45
From my personal study experience I find that the impact of technology on learning is valuable	High school matriculation	One to three years of post-secondary education	,32
		Four or more years of post-secondary education	,31
	One to three years of post-secondary education	High school matriculation	,26
		Four or more years of post-secondary education	,35
	Four or more years of post-secondary education	High school matriculation	,18
		One to three years of post-secondary education	,28
Information and communications technology has usually been used to encourage us to be active participants	High school matriculation	One to three years of post-secondary education	,29
		Four or more years of post-secondary education	,47

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	95% Confidence Interval Upper Bound
Information and communications technology has usually been used to encourage us to be active participants in learning	One to three years of post-secondary education	High school matriculation	,34
		Four or more years of post-secondary education	,57
	Four or more years of post-secondary education	High school matriculation	,06
		One to three years of post-secondary education	,10
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	High school matriculation	One to three years of post-secondary education	,33
		Four or more years of post-secondary education	,66
	One to three years of post-secondary education	High school matriculation	,29
		Four or more years of post-secondary education	,71
	Four or more years of post-secondary education	High school matriculation	-,13
		One to three years of post-secondary education	-,03
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	High school matriculation	One to three years of post-secondary education	,21
		Four or more years of post-secondary education	,36
	One to three years of post-secondary education	High school matriculation	,49
		Four or more years of post-secondary education	,59
	Four or more years of post-secondary education	High school matriculation	,22
		One to three years of post-secondary education	,16
Learning is enhanced when text and pictures are integrated in a multimedia environment	High school matriculation	One to three years of post-secondary education	,43
		Four or more years of post-secondary education	,44
	One to three years of post-secondary education	High school matriculation	,16
		Four or more years of post-secondary education	,37
	Four or more years of post-secondary education	High school matriculation	,05
		One to three years of post-secondary education	,25
Educational games motivate learners and contribute to developing skills such as teamwork	High school matriculation	One to three years of post-secondary education	,25
		Four or more years of post-secondary education	,41
	One to three years of post-secondary education	High school matriculation	,46
		Four or more years of post-secondary education	,60
	Four or more years of post-secondary education	High school matriculation	,19
		One to three years of post-secondary education	,17

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your level of education?	(J) What is your level of education?	95% Confidence Interval Upper Bound
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	High school matriculation	One to three years of post-secondary education	,17
		Four or more years of post-secondary education	,30
	One to three years of post-secondary education	High school matriculation	,48
		Four or more years of post-secondary education	,54
	Four or more years of post-secondary education	High school matriculation	,21
		One to three years of post-secondary education	,15
Technology facilitates easier access to material for those studying part-time	High school matriculation	One to three years of post-secondary education	,18
		Four or more years of post-secondary education	,04
	One to three years of post-secondary education	High school matriculation	,43
		Four or more years of post-secondary education	,25
	Four or more years of post-secondary education	High school matriculation	,45
		One to three years of post-secondary education	,41
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	High school matriculation	One to three years of post-secondary education	,37
		Four or more years of post-secondary education	,52
	One to three years of post-secondary education	High school matriculation	,53
		Four or more years of post-secondary education	,73
	Four or more years of post-secondary education	High school matriculation	,20
		One to three years of post-secondary education	,24
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	High school matriculation	One to three years of post-secondary education	,29
		Four or more years of post-secondary education	,49
	One to three years of post-secondary education	High school matriculation	,55
		Four or more years of post-secondary education	,73
	Four or more years of post-secondary education	High school matriculation	,18
		One to three years of post-secondary education	,17
Study at an Open University is especially of advantage to adults who have work and family obligations	High school matriculation	One to three years of post-secondary education	,21
		Four or more years of post-secondary education	,09
	One to three years of post-secondary education	High school matriculation	,36
		Four or more years of post-secondary education	,24
	Four or more years of post-secondary education	High school matriculation	,36
		One to three years of post-secondary education	,37

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

Thanks to technology, the problems of access to learning for students with disabilities have been resolved

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	110	3,38
High school matriculation	179	3,47
One to three years of post-secondary education	67	3,61
Sig.		,175

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 101,342.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	110	2,44
One to three years of post-secondary education	64	2,67
High school matriculation	179	2,71
Sig.		,232

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 99,002.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05	
		1	2
Four or more years of post-secondary education	108	2,98	
High school matriculation	179	3,32	3,32
One to three years of post-secondary education	67		3,51
Sig.		,083	,488

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,768.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Only optimistic people think that the impact of technology on learning is beneficial

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
High school matriculation	179	3,53
One to three years of post-secondary education	66	3,55
Four or more years of post-secondary education	109	3,61
Sig.		,840

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,293.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

From my personal study experience I find that the impact of technology on learning is valuable

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	110	4,07
One to three years of post-secondary education	66	4,11
High school matriculation	178	4,13
Sig.		,865

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,468.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has usually been used to encourage us to be active participants in learning

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	109	3,31
High school matriculation	179	3,52
One to three years of post-secondary education	66	3,55
Sig.		,173

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,293.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05	
		1	2
Four or more years of post-secondary education	110	3,13	
One to three years of post-secondary education	66		3,50
High school matriculation	179		3,52
Sig.		1,000	,988

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,573.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	110	3,43
High school matriculation	178	3,50
One to three years of post-secondary education	64	3,64
Sig.		,303

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 98,899.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Learning is enhanced when text and pictures are integrated in a multimedia environment

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	109	4,00
One to three years of post-secondary education	66	4,06
High school matriculation	179	4,20
Sig.		,242

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,293.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Educational games motivate learners and contribute to developing skills such as teamwork

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	110	3,66
High school matriculation	177	3,77
One to three years of post-secondary education	66	3,88
Sig.		,323

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 100,361.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	105	4,21
High school matriculation	174	4,25
One to three years of post-secondary education	54	4,41
Sig.		,294

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 88,785.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Technology facilitates easier access to material for those studying part-time

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
High school matriculation	174	4,37
One to three years of post-secondary education	55	4,49
Four or more years of post-secondary education	105	4,57
Sig.		,236

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 89,679.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	104	3,41
High school matriculation	174	3,57
One to three years of post-secondary education	55	3,65
Sig.		,395

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 89,434.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
Four or more years of post-secondary education	104	3,01
High school matriculation	173	3,16
One to three years of post-secondary education	55	3,29
Sig.		,233

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 89,345.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Study at an Open University is especially of advantage to adults who have work and family obligations

Scheffe[a,b]

What is your level of education?	N	Subset for alpha = .05
		1
High school matriculation	174	4,61
One to three years of post-secondary education	55	4,69
Four or more years of post-secondary education	105	4,75
Sig.		,465

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 89,679.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

B.13 Einweg-ANOVA für Variable Beruf

ANOVA

		Sum of Squares	df	Mean Square
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Between Groups	17,493	5	3,499
	Within Groups	255,246	351	,727
	Total	272,739	356	
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Between Groups	27,718	5	5,544
	Within Groups	416,485	348	1,197
	Total	444,203	353	
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Between Groups	12,143	5	2,429
	Within Groups	417,040	349	1,195
	Total	429,183	354	
Only optimistic people think that the impact of technology on learning is beneficial	Between Groups	13,123	5	2,625
	Within Groups	342,071	349	,980
	Total	355,194	354	
From my personal study experience I find that the impact of technology on learning is valuable	Between Groups	2,401	5	,480
	Within Groups	232,315	349	,666
	Total	234,715	354	
Information and communications technology has usually been used to encourage	Between Groups	10,096	5	2,019
	Within Groups	263,792	349	,756
	Total	273,887	354	
Information and communications technology has been used to support the	Between Groups	6,545	5	1,309
	Within Groups	285,500	350	,816
	Total	292,045	355	
Information and communications technology has been used to support more	Between Groups	3,596	5	,719
	Within Groups	326,901	348	,939
	Total	330,497	353	
Learning is enhanced when text and pictures are integrated in a multimedia environment	Between Groups	1,718	5	,344
	Within Groups	237,775	349	,681
	Total	239,493	354	
Educational games motivate learners and contribute to developing skills such as teamwork	Between Groups	18,805	5	3,761
	Within Groups	341,819	348	,982
	Total	360,624	353	
The application of new ICT concepts to support learning and teaching and provide Internet access to	Between Groups	19,005	5	3,801
	Within Groups	218,427	329	,664
	Total	237,433	334	
Technology facilitates easier access to material for those studying part-time	Between Groups	7,151	5	1,430
	Within Groups	207,885	330	,630
	Total	215,036	335	
University degrees awarded by open universities may be comparable to degrees	Between Groups	44,445	5	8,889
	Within Groups	416,976	329	1,267
	Total	461,421	334	
There is no difference in learning outcomes between studying at an Open University or at a	Between Groups	17,919	5	3,584
	Within Groups	383,018	328	1,168
	Total	400,937	333	
Study at an Open University is especially of advantage to adults who have work and family	Between Groups	22,209	5	4,442
	Within Groups	162,457	330	,492
	Total	184,667	335	

ANOVA

		F	Sig.
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Between Groups Within Groups Total	4,811	,000
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Between Groups Within Groups Total	4,632	,000
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Between Groups Within Groups Total	2,032	,074
Only optimistic people think that the impact of technology on learning is beneficial	Between Groups Within Groups Total	2,678	,022
From my personal study experience I find that the impact of technology on learning is valuable	Between Groups Within Groups Total	,721	,608
Information and communications technology has usually been used to encourage	Between Groups Within Groups Total	2,671	,022
Information and communications technology has been used to support the	Between Groups Within Groups Total	1,605	,158
Information and communications technology has been used to support more	Between Groups Within Groups Total	,766	,575
Learning is enhanced when text and pictures are integrated in a multimedia environment	Between Groups Within Groups Total	,504	,773
Educational games motivate learners and contribute to developing skills such as teamwork	Between Groups Within Groups Total	3,829	,002
The application of new ICT concepts to support learning and teaching and provide Internet access to	Between Groups Within Groups Total	5,725	,000
Technology facilitates easier access to material for those studying part-time	Between Groups Within Groups Total	2,270	,047
University degrees awarded by open universities may be comparable to degrees	Between Groups Within Groups Total	7,014	,000
There is no difference in learning outcomes between studying at an Open University or at a	Between Groups Within Groups Total	3,069	,010
Study at an Open University is especially of advantage to adults who have work and family	Between Groups Within Groups Total	9,023	,000

Post Hoc Tests

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Manager	Technical	-,026	,153	1,000
		Teacher or Trainer	-,183	,141	,892
		Student	,359	,144	,287
		Unemployed	-,387	,206	,623
		Other (e.g. retired)	-,183	,157	,929
	Technical	Manager	,026	,153	1,000
		Teacher or Trainer	-,156	,146	,950
		Student	,386	,149	,248
		Unemployed	-,361	,210	,709
		Other (e.g. retired)	-,157	,162	,967
	Teacher or Trainer	Manager	,183	,141	,892
		Technical	,156	,146	,950
		Student	,542*	,136	,008
		Unemployed	-,204	,201	,960
		Other (e.g. retired)	-,001	,150	1,000
	Student	Manager	-,359	,144	,287
		Technical	-,386	,149	,248
		Teacher or Trainer	-,542*	,136	,008
		Unemployed	-,746*	,203	,021
		Other (e.g. retired)	-,543*	,153	,030
	Unemployed	Manager	,387	,206	,623
		Technical	,361	,210	,709
		Teacher or Trainer	,204	,201	,960
		Student	,746*	,203	,021
		Other (e.g. retired)	,203	,213	,969
	Other (e.g. retired)	Manager	,183	,157	,929
		Technical	,157	,162	,967
		Teacher or Trainer	,001	,150	1,000
		Student	,543*	,153	,030
		Unemployed	-,203	,213	,969
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Manager	Technical	,304	,198	,797
		Teacher or Trainer	,501	,182	,183
		Student	,249	,185	,875
		Unemployed	-,231	,275	,982
		Other (e.g. retired)	-,306	,202	,808
	Technical	Manager	-,304	,198	,797
		Teacher or Trainer	,197	,188	,953
		Student	-,054	,191	1,000
		Unemployed	-,534	,279	,597
		Other (e.g. retired)	-,610	,208	,129
	Teacher or Trainer	Manager	-,501	,182	,183
		Technical	-,197	,188	,953
		Student	-,252	,175	,838
		Unemployed	-,732	,268	,190
		Other (e.g. retired)	-,807*	,193	,004
	Student	Manager	-,249	,185	,875
		Technical	,054	,191	1,000
		Teacher or Trainer	,252	,175	,838
		Unemployed	-,480	,270	,676
		Other (e.g. retired)	-,555	,196	,159

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Unemployed	Manager	,231	,275	,982
		Technical	,534	,279	,597
		Teacher or Trainer	,732	,268	,190
		Student	,480	,270	,676
		Other (e.g. retired)	-,075	,282	1,000
	Other (e.g. retired)	Manager	,306	,202	,808
		Technical	,610	,208	,129
		Teacher or Trainer	,807*	,193	,004
		Student	,555	,196	,159
		Unemployed	,075	,282	1,000
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Manager	Technical	,332	,198	,731
		Teacher or Trainer	,177	,182	,966
		Student	,318	,185	,708
		Unemployed	-,050	,265	1,000
		Other (e.g. retired)	-,181	,202	,977
	Technical	Manager	-,332	,198	,731
		Teacher or Trainer	-,155	,189	,984
		Student	-,014	,192	1,000
		Unemployed	-,382	,270	,848
		Other (e.g. retired)	-,513	,209	,303
	Teacher or Trainer	Manager	-,177	,182	,966
		Technical	,155	,189	,984
		Student	,141	,175	,986
		Unemployed	-,227	,258	,978
		Other (e.g. retired)	-,359	,193	,629
	Student	Manager	-,318	,185	,708
		Technical	,014	,192	1,000
		Teacher or Trainer	-,141	,175	,986
		Unemployed	-,368	,261	,849
		Other (e.g. retired)	-,499	,196	,265
	Unemployed	Manager	,050	,265	1,000
		Technical	,382	,270	,848
		Teacher or Trainer	,227	,258	,978
		Student	,368	,261	,849
		Other (e.g. retired)	-,131	,273	,999
	Other (e.g. retired)	Manager	,181	,202	,977
		Technical	,513	,209	,303
		Teacher or Trainer	,359	,193	,629
		Student	,499	,196	,265
		Unemployed	,131	,273	,999
Only optimistic people think that the impact of technology on learning is beneficial	Manager	Technical	,269	,179	,811
		Teacher or Trainer	,330	,164	,545
		Student	,418	,168	,293
		Unemployed	,204	,240	,982
		Other (e.g. retired)	-,118	,183	,995
	Technical	Manager	-,269	,179	,811
		Teacher or Trainer	,061	,170	1,000
		Student	,149	,174	,981
		Unemployed	-,065	,244	1,000
		Other (e.g. retired)	-,387	,188	,518

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
Only optimistic people think that the impact of technology on learning is beneficial	Teacher or Trainer	Manager	-,330	,164	,545
		Technical	-,061	,170	1,000
		Student	,088	,159	,998
		Unemployed	-,126	,234	,998
		Other (e.g. retired)	-,448	,174	,256
	Student	Manager	-,418	,168	,293
		Technical	-,149	,174	,981
		Teacher or Trainer	-,088	,159	,998
		Unemployed	-,214	,236	,976
		Other (e.g. retired)	-,535	,178	,111
	Unemployed	Manager	-,204	,240	,982
		Technical	,065	,244	1,000
		Teacher or Trainer	,126	,234	,998
		Student	,214	,236	,976
		Other (e.g. retired)	-,322	,247	,889
	Other (e.g. retired)	Manager	,118	,183	,995
		Technical	,387	,188	,518
		Teacher or Trainer	,448	,174	,256
		Student	,535	,178	,111
		Unemployed	,322	,247	,889
From my personal study experience I find that the impact of technology on learning is valuable	Manager	Technical	,112	,147	,989
		Teacher or Trainer	,081	,135	,996
		Student	,215	,138	,787
		Unemployed	,261	,201	,891
		Other (e.g. retired)	,046	,151	1,000
	Technical	Manager	-,112	,147	,989
		Teacher or Trainer	-,031	,140	1,000
		Student	,103	,143	,991
		Unemployed	,149	,204	,991
		Other (e.g. retired)	-,066	,155	,999
	Teacher or Trainer	Manager	-,081	,135	,996
		Technical	,031	,140	1,000
		Student	,134	,130	,957
		Unemployed	,180	,196	,974
		Other (e.g. retired)	-,036	,144	1,000
	Student	Manager	-,215	,138	,787
		Technical	-,103	,143	,991
		Teacher or Trainer	-,134	,130	,957
		Unemployed	,045	,198	1,000
		Other (e.g. retired)	-,170	,146	,930
	Unemployed	Manager	-,261	,201	,891
		Technical	-,149	,204	,991
		Teacher or Trainer	-,180	,196	,974
		Student	-,045	,198	1,000
		Other (e.g. retired)	-,215	,207	,955
	Other (e.g. retired)	Manager	-,046	,151	1,000
		Technical	,066	,155	,999
		Teacher or Trainer	,036	,144	1,000
		Student	,170	,146	,930
		Unemployed	,215	,207	,955

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
Information and communications technology has usually been used to encourage us to be active participants in learning	Manager	Technical	,233	,157	,820
		Teacher or Trainer	-,183	,144	,901
		Student	-,206	,147	,855
		Unemployed	-,328	,214	,800
		Other (e.g. retired)	-,193	,161	,919
	Technical	Manager	-,233	,157	,820
		Teacher or Trainer	-,416	,149	,172
		Student	-,439	,152	,141
		Unemployed	-,561	,218	,251
		Other (e.g. retired)	-,426	,165	,250
	Teacher or Trainer	Manager	,183	,144	,901
		Technical	,416	,149	,172
		Student	-,023	,139	1,000
		Unemployed	-,145	,209	,993
		Other (e.g. retired)	-,011	,153	1,000
	Student	Manager	,206	,147	,855
		Technical	,439	,152	,141
		Teacher or Trainer	,023	,139	1,000
		Unemployed	-,122	,211	,997
		Other (e.g. retired)	,013	,156	1,000
	Unemployed	Manager	,328	,214	,800
		Technical	,561	,218	,251
		Teacher or Trainer	,145	,209	,993
		Student	,122	,211	,997
		Other (e.g. retired)	,135	,220	,996
	Other (e.g. retired)	Manager	,193	,161	,919
		Technical	,426	,165	,250
		Teacher or Trainer	,011	,153	1,000
		Student	-,013	,156	1,000
		Unemployed	-,135	,220	,996
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Manager	Technical	-,032	,163	1,000
		Teacher or Trainer	-,056	,150	1,000
		Student	-,365	,153	,340
		Unemployed	-,217	,219	,964
		Other (e.g. retired)	-,078	,167	,999
	Technical	Manager	,032	,163	1,000
		Teacher or Trainer	-,024	,155	1,000
		Student	-,334	,158	,486
		Unemployed	-,185	,223	,983
		Other (e.g. retired)	-,047	,172	1,000
	Teacher or Trainer	Manager	,056	,150	1,000
		Technical	,024	,155	1,000
		Student	-,310	,144	,468
		Unemployed	-,161	,213	,989
		Other (e.g. retired)	-,023	,159	1,000
	Student	Manager	,365	,153	,340
		Technical	,334	,158	,486
		Teacher or Trainer	,310	,144	,468
		Unemployed	,148	,215	,993
		Other (e.g. retired)	,287	,162	,679

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Unemployed	Manager	,217	,219	,964
		Technical	,185	,223	,983
		Teacher or Trainer	,161	,213	,989
		Student	-,148	,215	,993
		Other (e.g. retired)	,139	,226	,996
	Other (e.g. retired)	Manager	,078	,167	,999
		Technical	,047	,172	1,000
		Teacher or Trainer	,023	,159	1,000
		Student	-,287	,162	,679
		Unemployed	-,139	,226	,996
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Manager	Technical	,017	,175	1,000
		Teacher or Trainer	-,125	,161	,988
		Student	-,223	,164	,871
		Unemployed	-,115	,239	,999
		Other (e.g. retired)	,053	,179	1,000
	Technical	Manager	-,017	,175	1,000
		Teacher or Trainer	-,142	,167	,982
		Student	-,240	,169	,849
		Unemployed	-,132	,243	,998
		Other (e.g. retired)	,036	,184	1,000
	Teacher or Trainer	Manager	,125	,161	,988
		Technical	,142	,167	,982
		Student	-,098	,155	,995
		Unemployed	,010	,233	1,000
		Other (e.g. retired)	,178	,171	,955
	Student	Manager	,223	,164	,871
		Technical	,240	,169	,849
		Teacher or Trainer	,098	,155	,995
		Unemployed	,108	,235	,999
		Other (e.g. retired)	,276	,174	,774
	Unemployed	Manager	,115	,239	,999
		Technical	,132	,243	,998
		Teacher or Trainer	-,010	,233	1,000
		Student	-,108	,235	,999
		Other (e.g. retired)	,168	,246	,993
	Other (e.g. retired)	Manager	-,053	,179	1,000
		Technical	-,036	,184	1,000
		Teacher or Trainer	-,178	,171	,955
		Student	-,276	,174	,774
		Unemployed	-,168	,246	,993
Learning is enhanced when text and pictures are integrated in a multimedia environment	Manager	Technical	,142	,149	,970
		Teacher or Trainer	,115	,136	,983
		Student	,079	,139	,997
		Unemployed	,303	,203	,817
		Other (e.g. retired)	,099	,152	,995
	Technical	Manager	-,142	,149	,970
		Teacher or Trainer	-,027	,142	1,000
		Student	-,063	,145	,999
		Unemployed	,161	,207	,988
		Other (e.g. retired)	-,043	,158	1,000

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
Learning is enhanced when text and pictures are integrated in a multimedia environment	Teacher or Trainer	Manager	-,115	,136	,983
		Technical	,027	,142	1,000
		Student	-,036	,132	1,000
		Unemployed	,188	,198	,970
		Other (e.g. retired)	-,016	,145	1,000
	Student	Manager	-,079	,139	,997
		Technical	,063	,145	,999
		Teacher or Trainer	,036	,132	1,000
		Unemployed	,224	,200	,939
		Other (e.g. retired)	,020	,148	1,000
	Unemployed	Manager	-,303	,203	,817
		Technical	-,161	,207	,988
		Teacher or Trainer	-,188	,198	,970
		Student	-,224	,200	,939
		Other (e.g. retired)	-,204	,209	,966
	Other (e.g. retired)	Manager	-,099	,152	,995
		Technical	,043	,158	1,000
		Teacher or Trainer	,016	,145	1,000
		Student	-,020	,148	1,000
		Unemployed	,204	,209	,966
Educational games motivate learners and contribute to developing skills such as teamwork	Manager	Technical	,272	,178	,802
		Teacher or Trainer	-,448	,165	,195
		Student	-,135	,167	,985
		Unemployed	,015	,244	1,000
		Other (e.g. retired)	-,084	,183	,999
	Technical	Manager	-,272	,178	,802
		Teacher or Trainer	-,721*	,171	,004
		Student	-,407	,173	,357
		Unemployed	-,257	,248	,956
		Other (e.g. retired)	-,357	,188	,611
	Teacher or Trainer	Manager	,448	,165	,195
		Technical	,721*	,171	,004
		Student	,313	,159	,569
		Unemployed	,464	,239	,583
		Other (e.g. retired)	,364	,176	,508
	Student	Manager	,135	,167	,985
		Technical	,407	,173	,357
		Teacher or Trainer	-,313	,159	,569
		Unemployed	,150	,240	,996
		Other (e.g. retired)	,051	,178	1,000
	Unemployed	Manager	-,015	,244	1,000
		Technical	,257	,248	,956
		Teacher or Trainer	-,464	,239	,583
		Student	-,150	,240	,996
		Other (e.g. retired)	-,099	,251	1,000
	Other (e.g. retired)	Manager	,084	,183	,999
		Technical	,357	,188	,611
		Teacher or Trainer	-,364	,176	,508
		Student	-,051	,178	1,000
		Unemployed	,099	,251	1,000

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Manager	Technical	-,333	,148	,409
		Teacher or Trainer	-,244	,136	,670
		Student	,300	,145	,506
		Unemployed	-,351	,213	,743
		Other (e.g. retired)	-,330	,151	,445
	Technical	Manager	,333	,148	,409
		Teacher or Trainer	,089	,142	,995
		Student	,634*	,150	,004
		Unemployed	-,018	,216	1,000
		Other (e.g. retired)	,003	,155	1,000
	Teacher or Trainer	Manager	,244	,136	,670
		Technical	-,089	,142	,995
		Student	,545*	,138	,009
		Unemployed	-,107	,208	,998
		Other (e.g. retired)	-,086	,145	,997
	Student	Manager	-,300	,145	,506
		Technical	-,634*	,150	,004
		Teacher or Trainer	-,545*	,138	,009
		Unemployed	-,651	,214	,101
		Other (e.g. retired)	-,630*	,152	,005
	Unemployed	Manager	,351	,213	,743
		Technical	,018	,216	1,000
		Teacher or Trainer	,107	,208	,998
		Student	,651	,214	,101
		Other (e.g. retired)	,021	,218	1,000
	Other (e.g. retired)	Manager	,330	,151	,445
		Technical	-,003	,155	1,000
		Teacher or Trainer	,086	,145	,997
		Student	,630*	,152	,005
		Unemployed	-,021	,218	1,000
Technology facilitates easier access to material for those studying part-time	Manager	Technical	-,188	,144	,889
		Teacher or Trainer	-,083	,133	,996
		Student	,252	,141	,670
		Unemployed	,162	,203	,986
		Other (e.g. retired)	,065	,147	,999
	Technical	Manager	,188	,144	,889
		Teacher or Trainer	,105	,138	,989
		Student	,439	,146	,108
		Unemployed	,349	,206	,721
		Other (e.g. retired)	,253	,151	,732
	Teacher or Trainer	Manager	,083	,133	,996
		Technical	-,105	,138	,989
		Student	,335	,135	,292
		Unemployed	,244	,199	,911
		Other (e.g. retired)	,148	,141	,953
	Student	Manager	-,252	,141	,670
		Technical	-,439	,146	,108
		Teacher or Trainer	-,335	,135	,292
		Unemployed	-,090	,204	,999
		Other (e.g. retired)	-,187	,148	,903

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
Technology facilitates easier access to material for those studying part-time	Unemployed	Manager	-,162	,203	,986
		Technical	-,349	,206	,721
		Teacher or Trainer	-,244	,199	,911
		Student	,090	,204	,999
		Other (e.g. retired)	-,096	,208	,999
	Other (e.g. retired)	Manager	-,065	,147	,999
		Technical	-,253	,151	,732
		Teacher or Trainer	-,148	,141	,953
		Student	,187	,148	,903
		Unemployed	,096	,208	,999
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Manager	Technical	-,124	,205	,996
		Teacher or Trainer	,363	,189	,598
		Student	,497	,201	,295
		Unemployed	-,522	,288	,658
		Other (e.g. retired)	-,497	,209	,343
	Technical	Manager	,124	,205	,996
		Teacher or Trainer	,487	,196	,291
		Student	,621	,207	,111
		Unemployed	-,398	,293	,869
		Other (e.g. retired)	-,374	,215	,696
	Teacher or Trainer	Manager	-,363	,189	,598
		Technical	-,487	,196	,291
		Student	,135	,191	,992
		Unemployed	-,885	,282	,082
		Other (e.g. retired)	-,860*	,200	,003
	Student	Manager	-,497	,201	,295
		Technical	-,621	,207	,111
		Teacher or Trainer	-,135	,191	,992
		Unemployed	-1,019*	,290	,032
		Other (e.g. retired)	-,995*	,211	,001
	Unemployed	Manager	,522	,288	,658
		Technical	,398	,293	,869
		Teacher or Trainer	,885	,282	,082
		Student	1,019*	,290	,032
		Other (e.g. retired)	,025	,295	1,000
	Other (e.g. retired)	Manager	,497	,209	,343
		Technical	,374	,215	,696
		Teacher or Trainer	,860*	,200	,003
		Student	,995*	,211	,001
		Unemployed	-,025	,295	1,000
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Manager	Technical	-,100	,198	,998
		Teacher or Trainer	,154	,182	,982
		Student	,127	,193	,994
		Unemployed	-,572	,277	,513
		Other (e.g. retired)	-,412	,201	,519
	Technical	Manager	,100	,198	,998
		Teacher or Trainer	,255	,189	,873
		Student	,227	,199	,935
		Unemployed	-,471	,281	,730
		Other (e.g. retired)	-,312	,207	,810

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	Mean Difference (I-J)	Std. Error	Sig.
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Teacher or Trainer	Manager	-,154	,182	,982
		Technical	-,255	,189	,873
		Student	-,028	,183	1,000
		Unemployed	-,726	,270	,209
		Other (e.g. retired)	-,567	,192	,124
	Student	Manager	-,127	,193	,994
		Technical	-,227	,199	,935
		Teacher or Trainer	,028	,183	1,000
		Unemployed	-,698	,278	,279
		Other (e.g. retired)	-,539	,202	,216
	Unemployed	Manager	,572	,277	,513
		Technical	,471	,281	,730
		Teacher or Trainer	,726	,270	,209
		Student	,698	,278	,279
		Other (e.g. retired)	,159	,284	,997
	Other (e.g. retired)	Manager	,412	,201	,519
		Technical	,312	,207	,810
		Teacher or Trainer	,567	,192	,124
		Student	,539	,202	,216
		Unemployed	-,159	,284	,997
Study at an Open University is especially of advantage to adults who have work and family obligations	Manager	Technical	-,165	,127	,891
		Teacher or Trainer	-,095	,117	,985
		Student	,532*	,125	,003
		Unemployed	-,073	,179	,999
		Other (e.g. retired)	-,210	,130	,759
	Technical	Manager	,165	,127	,891
		Teacher or Trainer	,070	,122	,997
		Student	,697*	,129	,000
		Unemployed	,092	,182	,998
		Other (e.g. retired)	-,045	,134	1,000
	Teacher or Trainer	Manager	,095	,117	,985
		Technical	-,070	,122	,997
		Student	,627*	,119	,000
		Unemployed	,022	,176	1,000
		Other (e.g. retired)	-,115	,125	,974
	Student	Manager	-,532*	,125	,003
		Technical	-,697*	,129	,000
		Teacher or Trainer	-,627*	,119	,000
		Unemployed	-,605*	,180	,049
		Other (e.g. retired)	-,742*	,131	,000
	Unemployed	Manager	,073	,179	,999
		Technical	-,092	,182	,998
		Teacher or Trainer	-,022	,176	1,000
		Student	,605*	,180	,049
		Other (e.g. retired)	-,137	,184	,990
	Other (e.g. retired)	Manager	,210	,130	,759
		Technical	,045	,134	1,000
		Teacher or Trainer	,115	,125	,974
		Student	,742*	,131	,000
		Unemployed	,137	,184	,990

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
Thanks to technology, the problems of access to learning for students with disabilities have been resolved	Manager	Technical	-,54	,49
		Teacher or Trainer	-,65	,29
		Student	-,12	,84
		Unemployed	-1,08	,30
		Other (e.g. retired)	-,71	,34
	Technical	Manager	-,49	,54
		Teacher or Trainer	-,65	,33
		Student	-,11	,88
		Unemployed	-1,06	,34
		Other (e.g. retired)	-,70	,39
	Teacher or Trainer	Manager	-,29	,65
		Technical	-,33	,65
		Student	,09	1,00
		Unemployed	-,88	,47
		Other (e.g. retired)	-,50	,50
	Student	Manager	-,84	,12
		Technical	-,88	,11
		Teacher or Trainer	-1,00	-,09
		Unemployed	-1,43	-,07
		Other (e.g. retired)	-1,05	-,03
	Unemployed	Manager	-,30	1,08
		Technical	-,34	1,06
		Teacher or Trainer	-,47	,88
		Student	,07	1,43
		Other (e.g. retired)	-,51	,92
	Other (e.g. retired)	Manager	-,34	,71
		Technical	-,39	,70
		Teacher or Trainer	-,50	,50
		Student	,03	1,05
		Unemployed	-,92	,51
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Manager	Technical	-,36	,97
		Teacher or Trainer	-,11	1,11
		Student	-,37	,87
		Unemployed	-1,15	,69
		Other (e.g. retired)	-,98	,37
	Technical	Manager	-,97	,36
		Teacher or Trainer	-,43	,83
		Student	-,69	,59
		Unemployed	-1,47	,40
		Other (e.g. retired)	-1,31	,09
	Teacher or Trainer	Manager	-1,11	,11
		Technical	-,83	,43
		Student	-,84	,33
		Unemployed	-1,63	,16
		Other (e.g. retired)	-1,45	-,16
	Student	Manager	-,87	,37
		Technical	-,59	,69
		Teacher or Trainer	-,33	,84
		Unemployed	-1,38	,42
		Other (e.g. retired)	-1,21	,10

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
Contacts between students and teachers can have the same intensity in online education as in face-to-face education	Unemployed	Manager	-,69	1,15
		Technical	-,40	1,47
		Teacher or Trainer	-,16	1,63
		Student	-,42	1,38
		Other (e.g. retired)	-1,02	,87
	Other (e.g. retired)	Manager	-,37	,98
		Technical	-,09	1,31
		Teacher or Trainer	,16	1,45
		Student	-,10	1,21
		Unemployed	-,87	1,02
Online communication allows increased amounts of communication between teachers and students when compared with other forms of education	Manager	Technical	-,33	1,00
		Teacher or Trainer	-,43	,78
		Student	-,30	,94
		Unemployed	-,94	,84
		Other (e.g. retired)	-,86	,50
	Technical	Manager	-1,00	,33
		Teacher or Trainer	-,79	,48
		Student	-,66	,63
		Unemployed	-1,29	,52
		Other (e.g. retired)	-1,21	,18
	Teacher or Trainer	Manager	-,78	,43
		Technical	-,48	,79
		Student	-,44	,73
		Unemployed	-1,09	,64
		Other (e.g. retired)	-1,00	,29
	Student	Manager	-,94	,30
		Technical	-,63	,66
		Teacher or Trainer	-,73	,44
		Unemployed	-1,24	,50
		Other (e.g. retired)	-1,16	,16
	Unemployed	Manager	-,84	,94
		Technical	-,52	1,29
		Teacher or Trainer	-,64	1,09
		Student	-,50	1,24
		Other (e.g. retired)	-1,04	,78
	Other (e.g. retired)	Manager	-,50	,86
		Technical	-,18	1,21
		Teacher or Trainer	-,29	1,00
		Student	-,16	1,16
		Unemployed	-,78	1,04
Only optimistic people think that the impact of technology on learning is beneficial	Manager	Technical	-,33	,87
		Teacher or Trainer	-,22	,88
		Student	-,15	,98
		Unemployed	-,60	1,01
		Other (e.g. retired)	-,73	,50
	Technical	Manager	-,87	,33
		Teacher or Trainer	-,51	,63
		Student	-,43	,73
		Unemployed	-,88	,75
		Other (e.g. retired)	-1,02	,24

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
Only optimistic people think that the impact of technology on learning is beneficial	Teacher or Trainer	Manager	-,88	,22
		Technical	-,63	,51
		Student	-,44	,62
		Unemployed	-,91	,66
		Other (e.g. retired)	-1,03	,14
	Student	Manager	-,98	,15
		Technical	-,73	,43
		Teacher or Trainer	-,62	,44
		Unemployed	-1,00	,58
		Other (e.g. retired)	-1,13	,06
	Unemployed	Manager	-1,01	,60
		Technical	-,75	,88
		Teacher or Trainer	-,66	,91
		Student	-,58	1,00
		Other (e.g. retired)	-1,15	,51
	Other (e.g. retired)	Manager	-,50	,73
		Technical	-,24	1,02
		Teacher or Trainer	-,14	1,03
		Student	-,06	1,13
		Unemployed	-,51	1,15
From my personal study experience I find that the impact of technology on learning is valuable	Manager	Technical	-,38	,61
		Teacher or Trainer	-,37	,53
		Student	-,25	,68
		Unemployed	-,41	,93
		Other (e.g. retired)	-,46	,55
	Technical	Manager	-,61	,38
		Teacher or Trainer	-,50	,44
		Student	-,37	,58
		Unemployed	-,53	,83
		Other (e.g. retired)	-,59	,45
	Teacher or Trainer	Manager	-,53	,37
		Technical	-,44	,50
		Student	-,30	,57
		Unemployed	-,48	,84
		Other (e.g. retired)	-,52	,45
	Student	Manager	-,68	,25
		Technical	-,58	,37
		Teacher or Trainer	-,57	,30
		Unemployed	-,62	,71
		Other (e.g. retired)	-,66	,32
	Unemployed	Manager	-,93	,41
		Technical	-,83	,53
		Teacher or Trainer	-,84	,48
		Student	-,71	,62
		Other (e.g. retired)	-,91	,48
	Other (e.g. retired)	Manager	-,55	,46
		Technical	-,45	,59
		Teacher or Trainer	-,45	,52
		Student	-,32	,66
		Unemployed	-,48	,91

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
Information and communications technology has usually been used to encourage us to be active participants in learning	Manager	Technical	-,29	,76
		Teacher or Trainer	-,67	,30
		Student	-,70	,29
		Unemployed	-1,05	,39
		Other (e.g. retired)	-,73	,35
	Technical	Manager	-,76	,29
		Teacher or Trainer	-,92	,08
		Student	-,95	,07
		Unemployed	-1,29	,17
		Other (e.g. retired)	-,98	,13
	Teacher or Trainer	Manager	-,30	,67
		Technical	-,08	,92
		Student	-,49	,44
		Unemployed	-,84	,55
		Other (e.g. retired)	-,52	,50
	Student	Manager	-,29	,70
		Technical	-,07	,95
		Teacher or Trainer	-,44	,49
		Unemployed	-,83	,58
		Other (e.g. retired)	-,51	,53
	Unemployed	Manager	-,39	1,05
		Technical	-,17	1,29
		Teacher or Trainer	-,55	,84
		Student	-,58	,83
		Other (e.g. retired)	-,60	,87
	Other (e.g. retired)	Manager	-,35	,73
		Technical	-,13	,98
		Teacher or Trainer	-,50	,52
		Student	-,53	,51
		Unemployed	-,87	,60
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Manager	Technical	-,58	,51
		Teacher or Trainer	-,56	,45
		Student	-,88	,15
		Unemployed	-,95	,52
		Other (e.g. retired)	-,64	,48
	Technical	Manager	-,51	,58
		Teacher or Trainer	-,54	,49
		Student	-,86	,19
		Unemployed	-,93	,56
		Other (e.g. retired)	-,62	,53
	Teacher or Trainer	Manager	-,45	,56
		Technical	-,49	,54
		Student	-,79	,17
		Unemployed	-,87	,55
		Other (e.g. retired)	-,56	,51
	Student	Manager	-,15	,88
		Technical	-,19	,86
		Teacher or Trainer	-,17	,79
		Unemployed	-,57	,87
		Other (e.g. retired)	-,26	,83

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving	Unemployed	Manager	-,52	,95
		Technical	-,56	,93
		Teacher or Trainer	-,55	,87
		Student	-,87	,57
		Other (e.g. retired)	-,62	,89
	Other (e.g. retired)	Manager	-,48	,64
		Technical	-,53	,62
		Teacher or Trainer	-,51	,56
		Student	-,83	,26
		Unemployed	-,89	,62
Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs	Manager	Technical	-,57	,60
		Teacher or Trainer	-,66	,42
		Student	-,77	,33
		Unemployed	-,91	,69
		Other (e.g. retired)	-,55	,65
	Technical	Manager	-,60	,57
		Teacher or Trainer	-,70	,42
		Student	-,81	,33
		Unemployed	-,94	,68
		Other (e.g. retired)	-,58	,65
	Teacher or Trainer	Manager	-,42	,66
		Technical	-,42	,70
		Student	-,62	,42
		Unemployed	-,77	,79
		Other (e.g. retired)	-,39	,75
	Student	Manager	-,33	,77
		Technical	-,33	,81
		Teacher or Trainer	-,42	,62
		Unemployed	-,68	,89
		Other (e.g. retired)	-,31	,86
	Unemployed	Manager	-,69	,91
		Technical	-,68	,94
		Teacher or Trainer	-,79	,77
		Student	-,89	,68
		Other (e.g. retired)	-,65	,99
	Other (e.g. retired)	Manager	-,65	,55
		Technical	-,65	,58
		Teacher or Trainer	-,75	,39
		Student	-,86	,31
		Unemployed	-,99	,65
Learning is enhanced when text and pictures are integrated in a multimedia environment	Manager	Technical	-,36	,64
		Teacher or Trainer	-,34	,57
		Student	-,39	,54
		Unemployed	-,38	,98
		Other (e.g. retired)	-,41	,61
	Technical	Manager	-,64	,36
		Teacher or Trainer	-,50	,45
		Student	-,55	,42
		Unemployed	-,53	,85
		Other (e.g. retired)	-,57	,48

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
Learning is enhanced when text and pictures are integrated in a multimedia environment	Teacher or Trainer	Manager	-,57	,34
		Technical	-,45	,50
		Student	-,48	,41
		Unemployed	-,47	,85
		Other (e.g. retired)	-,50	,47
	Student	Manager	-,54	,39
		Technical	-,42	,55
		Teacher or Trainer	-,41	,48
		Unemployed	-,45	,89
		Other (e.g. retired)	-,48	,52
	Unemployed	Manager	-,98	,38
		Technical	-,85	,53
		Teacher or Trainer	-,85	,47
		Student	-,89	,45
		Other (e.g. retired)	-,90	,50
	Other (e.g. retired)	Manager	-,61	,41
		Technical	-,48	,57
		Teacher or Trainer	-,47	,50
		Student	-,52	,48
		Unemployed	-,50	,90
Educational games motivate learners and contribute to developing skills such as teamwork	Manager	Technical	-,32	,87
		Teacher or Trainer	-1,00	,10
		Student	-,69	,42
		Unemployed	-,80	,83
		Other (e.g. retired)	-,70	,53
	Technical	Manager	-,87	,32
		Teacher or Trainer	-1,29	-,15
		Student	-,99	,17
		Unemployed	-1,09	,57
		Other (e.g. retired)	-,99	,27
	Teacher or Trainer	Manager	-,10	1,00
		Technical	,15	1,29
		Student	-,22	,85
		Unemployed	-,33	1,26
		Other (e.g. retired)	-,22	,95
	Student	Manager	-,42	,69
		Technical	-,17	,99
		Teacher or Trainer	-,85	,22
		Unemployed	-,65	,95
		Other (e.g. retired)	-,54	,65
	Unemployed	Manager	-,83	,80
		Technical	-,57	1,09
		Teacher or Trainer	-1,26	,33
		Student	-,95	,65
		Other (e.g. retired)	-,94	,74
	Other (e.g. retired)	Manager	-,53	,70
		Technical	-,27	,99
		Teacher or Trainer	-,95	,22
		Student	-,65	,54
		Unemployed	-,74	,94

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education	Manager	Technical	-,83	,16
		Teacher or Trainer	-,70	,21
		Student	-,18	,78
		Unemployed	-1,06	,36
		Other (e.g. retired)	-,83	,18
	Technical	Manager	-,16	,83
		Teacher or Trainer	-,38	,56
		Student	,13	1,13
		Unemployed	-,74	,71
		Other (e.g. retired)	-,52	,52
	Teacher or Trainer	Manager	-,21	,70
		Technical	-,56	,38
		Student	,08	1,01
		Unemployed	-,80	,59
		Other (e.g. retired)	-,57	,40
	Student	Manager	-,78	,18
		Technical	-1,13	-,13
		Teacher or Trainer	-1,01	-,08
		Unemployed	-1,37	,06
		Other (e.g. retired)	-1,14	-,12
	Unemployed	Manager	-,36	1,06
		Technical	-,71	,74
		Teacher or Trainer	-,59	,80
		Student	-,06	1,37
		Other (e.g. retired)	-,71	,75
	Other (e.g. retired)	Manager	-,18	,83
		Technical	-,52	,52
		Teacher or Trainer	-,40	,57
		Student	,12	1,14
		Unemployed	-,75	,71
Technology facilitates easier access to material for those studying part-time	Manager	Technical	-,67	,29
		Teacher or Trainer	-,53	,36
		Student	-,22	,72
		Unemployed	-,52	,84
		Other (e.g. retired)	-,43	,56
	Technical	Manager	-,29	,67
		Teacher or Trainer	-,36	,57
		Student	-,05	,93
		Unemployed	-,34	1,04
		Other (e.g. retired)	-,25	,76
	Teacher or Trainer	Manager	-,36	,53
		Technical	-,57	,36
		Student	-,12	,79
		Unemployed	-,42	,91
		Other (e.g. retired)	-,32	,62
	Student	Manager	-,72	,22
		Technical	-,93	,05
		Teacher or Trainer	-,79	,12
		Unemployed	-,77	,59
		Other (e.g. retired)	-,68	,31

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
Technology facilitates easier access to material for those studying part-time	Unemployed	Manager	-,84	,52
		Technical	-1,04	,34
		Teacher or Trainer	-,91	,42
		Student	-,59	,77
		Other (e.g. retired)	-,79	,60
	Other (e.g. retired)	Manager	-,56	,43
		Technical	-,76	,25
		Teacher or Trainer	-,62	,32
		Student	-,31	,68
		Unemployed	-,60	,79
University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities	Manager	Technical	-,81	,56
		Teacher or Trainer	-,27	1,00
		Student	-,17	1,17
		Unemployed	-1,49	,44
		Other (e.g. retired)	-1,20	,20
	Technical	Manager	-,56	,81
		Teacher or Trainer	-,17	1,14
		Student	-,07	1,31
		Unemployed	-1,38	,58
		Other (e.g. retired)	-1,09	,35
	Teacher or Trainer	Manager	-1,00	,27
		Technical	-1,14	,17
		Student	-,50	,77
		Unemployed	-1,83	,06
		Other (e.g. retired)	-1,53	-,19
	Student	Manager	-1,17	,17
		Technical	-1,31	,07
		Teacher or Trainer	-,77	,50
		Unemployed	-1,99	-,05
		Other (e.g. retired)	-1,70	-,29
	Unemployed	Manager	-,44	1,49
		Technical	-,58	1,38
		Teacher or Trainer	-,06	1,83
		Student	,05	1,99
		Other (e.g. retired)	-,96	1,01
	Other (e.g. retired)	Manager	-,20	1,20
		Technical	-,35	1,09
		Teacher or Trainer	,19	1,53
		Student	,29	1,70
		Unemployed	-1,01	,96
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Manager	Technical	-,76	,56
		Teacher or Trainer	-,45	,76
		Student	-,52	,77
		Unemployed	-1,50	,35
		Other (e.g. retired)	-1,08	,26
	Technical	Manager	-,56	,76
		Teacher or Trainer	-,38	,89
		Student	-,44	,89
		Unemployed	-1,41	,47
		Other (e.g. retired)	-1,01	,38

Multiple Comparisons

Scheffe

Dependent Variable	(I) What is your occupation?	(J) What is your occupation?	95% Confidence Interval	
			Lower Bound	Upper Bound
There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university	Teacher or Trainer	Manager	-,76	,45
		Technical	-,89	,38
		Student	-,64	,59
		Unemployed	-1,63	,18
		Other (e.g. retired)	-1,21	,08
	Student	Manager	-,77	,52
		Technical	-,89	,44
		Teacher or Trainer	-,59	,64
		Unemployed	-1,63	,23
		Other (e.g. retired)	-1,22	,14
	Unemployed	Manager	-,35	1,50
		Technical	-,47	1,41
		Teacher or Trainer	-,18	1,63
		Student	-,23	1,63
		Other (e.g. retired)	-,79	1,11
	Other (e.g. retired)	Manager	-,26	1,08
		Technical	-,38	1,01
		Teacher or Trainer	-,08	1,21
		Student	-,14	1,22
		Unemployed	-1,11	,79
Study at an Open University is especially of advantage to adults who have work and family obligations	Manager	Technical	-,59	,26
		Teacher or Trainer	-,49	,30
		Student	,11	,95
		Unemployed	-,67	,53
		Other (e.g. retired)	-,64	,22
	Technical	Manager	-,26	,59
		Teacher or Trainer	-,34	,48
		Student	,27	1,13
		Unemployed	-,52	,70
		Other (e.g. retired)	-,49	,40
	Teacher or Trainer	Manager	-,30	,49
		Technical	-,48	,34
		Student	,23	1,03
		Unemployed	-,57	,61
		Other (e.g. retired)	-,53	,30
	Student	Manager	-,95	-,11
		Technical	-1,13	-,27
		Teacher or Trainer	-1,03	-,23
		Unemployed	-1,21	,00
		Other (e.g. retired)	-1,18	-,30
	Unemployed	Manager	-,53	,67
		Technical	-,70	,52
		Teacher or Trainer	-,61	,57
		Student	,00	1,21
		Other (e.g. retired)	-,75	,48
	Other (e.g. retired)	Manager	-,22	,64
		Technical	-,40	,49
		Teacher or Trainer	-,30	,53
		Student	,30	1,18
		Unemployed	-,48	,75

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

Thanks to technology, the problems of access to learning for students with disabilities have been resolved

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05	
		1	2
Student	75	3,08	
Manager	66	3,44	3,44
Technical	58	3,47	3,47
Teacher or Trainer	82	3,62	3,62
Other (e.g. retired)	53	3,62	3,62
Unemployed	23		3,83
Sig.		,075	,402

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 49,889.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Contacts between students and teachers can have the same intensity in online education as in face-to-face education

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05	
		1	2
Teacher or Trainer	82	2,27	
Technical	58	2,47	2,47
Student	75	2,52	2,52
Manager	65	2,77	2,77
Unemployed	21	3,00	3,00
Other (e.g. retired)	53		3,08
Sig.		,059	,190

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 48,138.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Online communication allows increased amounts of communication between teachers and students when compared with other forms of education

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05
		1
Technical	57	3,05
Student	75	3,07
Teacher or Trainer	82	3,21
Manager	65	3,38
Unemployed	23	3,43
Other (e.g. retired)	53	3,57
Sig.		,363

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 49,668.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Only optimistic people think that the impact of technology on learning is beneficial

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05
		1
Student	74	3,35
Teacher or Trainer	82	3,44
Technical	58	3,50
Unemployed	23	3,57
Manager	65	3,77
Other (e.g. retired)	53	3,89
Sig.		,204

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 49,718.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

From my personal study experience I find that the impact of technology on learning is valuable

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05
		1
Unemployed	22	3,95
Student	75	4,00
Technical	58	4,10
Teacher or Trainer	82	4,13
Other (e.g. retired)	53	4,17
Manager	65	4,22
Sig.		,776

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 48,989.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has usually been used to encourage us to be active participants in learning

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05
		1
Technical	58	3,12
Manager	65	3,35
Teacher or Trainer	82	3,54
Other (e.g. retired)	53	3,55
Student	75	3,56
Unemployed	22	3,68
Sig.		,072

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 48,989.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has been used to support the development of higher level thinking skills such as synthesis and problem solving

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05
		1
Manager	65	3,26
Technical	58	3,29
Teacher or Trainer	82	3,32
Other (e.g. retired)	53	3,34
Unemployed	23	3,48
Student	75	3,63
Sig.		,540

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 49,792.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Information and communications technology has been used to support more individualized learning programmes tailored to our own individual needs

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05
		1
Other (e.g. retired)	53	3,38
Technical	58	3,41
Manager	65	3,43
Unemployed	22	3,55
Teacher or Trainer	81	3,56
Student	75	3,65
Sig.		,851

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 48,929.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Learning is enhanced when text and pictures are integrated in a multimedia environment

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05
		1
Unemployed	22	3,91
Technical	57	4,07
Teacher or Trainer	82	4,10
Other (e.g. retired)	53	4,11
Student	75	4,13
Manager	66	4,21
Sig.		,654

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 48,961.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Educational games motivate learners and contribute to developing skills such as teamwork

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05	
		1	2
Technical	58	3,38	
Unemployed	22	3,64	3,64
Manager	66	3,65	3,65
Other (e.g. retired)	53	3,74	3,74
Student	75	3,79	3,79
Teacher or Trainer	80		4,10
Sig.		,531	,376

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 48,960.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The application of new ICT concepts to support learning and teaching and provide Internet access to student administrative processes, has improved distance education

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05	
		1	2
Student	62	3,82	
Manager	65	4,12	4,12
Teacher or Trainer	79	4,37	4,37
Other (e.g. retired)	53		4,45
Technical	57		4,46
Unemployed	19		4,47
Sig.		,077	,526

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 45,040.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Technology facilitates easier access to material for those studying part-time

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05 1
Student	62	4,21
Unemployed	20	4,30
Other (e.g. retired)	53	4,40
Manager	65	4,46
Teacher or Trainer	79	4,54
Technical	57	4,65
Sig.		,221

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 45,948.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

University degrees awarded by open universities may be comparable to degrees from traditional face-to-face universities

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05 1	2
Student	62	3,08	
Teacher or Trainer	79	3,22	
Manager	64	3,58	3,58
Technical	57	3,70	3,70
Other (e.g. retired)	53		4,08
Unemployed	20		4,10
Sig.		,225	,427

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 45,863.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

There is no difference in learning outcomes between studying at an Open University or at a traditional face-to-face university

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05 1
Teacher or Trainer	79	2,92
Student	62	2,95
Manager	64	3,08
Technical	56	3,18
Other (e.g. retired)	53	3,49
Unemployed	20	3,65
Sig.		,069

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 45,754.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Study at an Open University is especially of advantage to adults who have work and family obligations

Scheffe[a,b]

What is your occupation?	N	Subset for alpha = .05	
		1	2
Student	62	4,15	
Manager	65		4,68
Unemployed	20		4,75
Teacher or Trainer	79		4,77
Technical	57		4,84
Other (e.g. retired)	53		4,89
Sig.		1,000	,841

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 45,948.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.